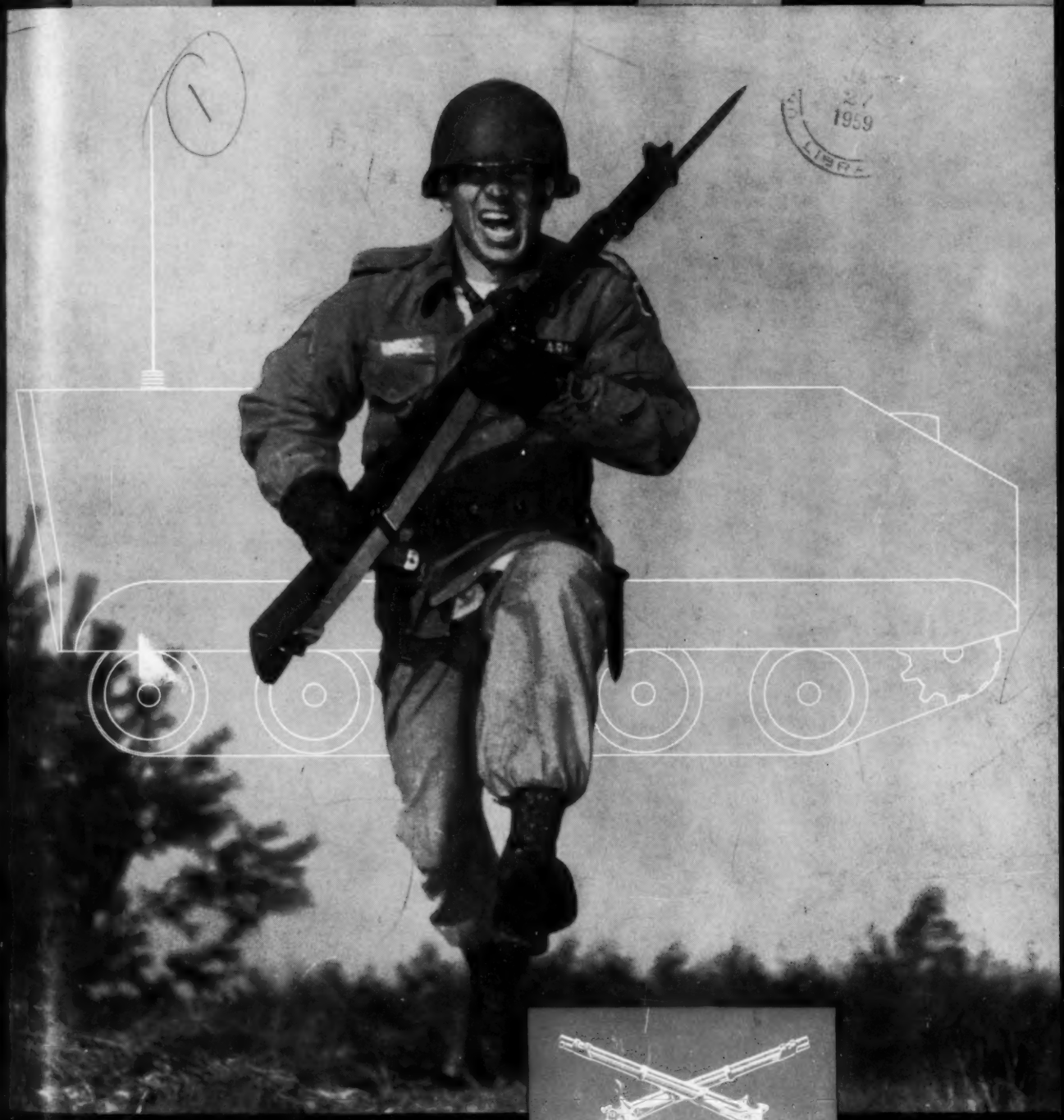
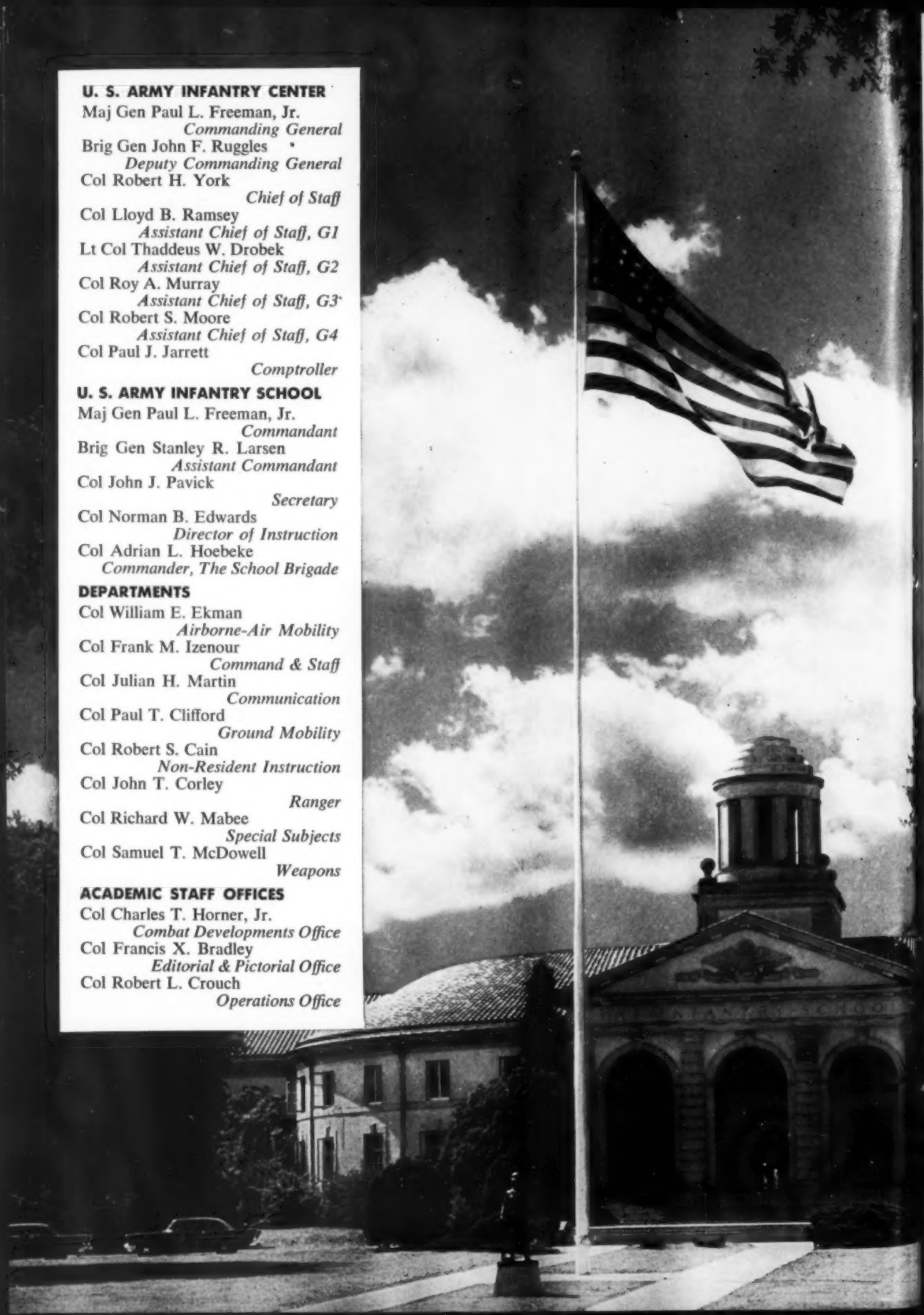
Infantry



Professional Journal for Infantrymen

Jan-Mar 1959



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THE COVER

The Infantry must combine its traditional foot mobility with that of fast, light, mechanized carriers and "flying jeeps." While the Infantryman will continue to destroy the enemy by ground combat he must reach the point of ultimate decision by rapid movement over or above any kind of terrain. Cover photo furnished by the 10th (now the 2d) Infantry Division.

Infantry

The Professional Journal for Infantrymen

OFFICIAL PUBLICATION

UNITED STATES ARMY INFANTRY SCHOOL

VOL. 49 First Quarter January-March 1959 No. 1

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Dear Infantryman:

I wish to take this opportunity to express to all Infantry Officers the deep personal interest which I and the other members of the Infantry Branch of the Officers Assignment Division have in your individual and collective welfare. Starting with this issue of *Infantry* we shall provide, on a regular basis, information which we hope will help you to pursue a more interesting, a more satisfying and a more productive Infantry career.

While most of the procedures and policies which govern Department of the Army personnel actions are covered by current regulations or circulars, I realize that it is difficult for many officers to keep up with or interpret all of the things which could affect their careers. The need for additional information is reflected in the number and variety of questions we receive daily either in letters or from officers who visit the Infantry Branch.

In each issue of *Infantry* we shall attempt to provide answers to some of the queries we receive most frequently. At the same time we shall bring to your attention areas in which you may be able to help us do a better job for you, and we shall point out some of the things you can do personally to advance your own career.

I consider the last item especially important, for the thing we are dealing with is *your* career. You, more than anyone else, can make it what you want it to be. There is so much that you can do—more than many officers realize—to make it successful. The manner in which you perform your duties is, of course, paramount. It is a part of your official record. The steps you take toward self-improvement and professional growth are also important and should be included in your files. It is wise to review your records in our office periodically so you will know how you look to those who take personnel actions which affect your career. I suggest also that you work on any weak points which are reflected in your records and that you discuss your problems, your strong points and your desires with us. Actively seek assignments which will utilize your special capabilities and which will be in the best interests of the service. Don't let your career drift; take a positive interest in it and work at it. I can assure you that Infantry Branch will help you in every way possible.

FROM CHIEF, INFANTRY BRANCH

R. H. Tucker

R. H. TUCKER
Brigadier General, USA
Chief, Infantry Branch, OAD

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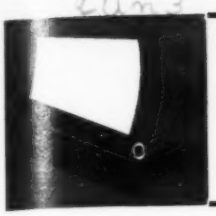
Jun3



THE EDITOR SAYS

DEAR READER:

The Infantry is pressing and will continue to press for increased ground and air mobility. Conferees at the recent World-Wide Infantry Conference — an assembly of the best thinking on Infantry from all segments of the Army — concluded that the "mach .004 foot-speed" of the Infantry soldier is too slow for the nuclear battlefield.

For the present and the immediate future, the Conference called for mechanization of the Infantry with light, fast personnel carriers and weapons platforms, supplemented with increased battlefield airlift capabilities of rotary- and fixed-wing Army aircraft. For the future, it established requirements for zero-ground-pressure, terrain-hugging vehicles operating on "flying jeep" or more advanced principles.

At the same time the Conference called for increased physical capabilities in the Infantry soldier which will permit faster movement, over greater distances, on foot.

These two demands — mechanization and increased foot mobility—are not incongruous. Actually, they are complementary, for mobility in combat is relative. Our ability to move over the battlefield, under any conditions of terrain, climate, weather or visibility must match or exceed that of the enemy, irrespective of the means employed.

The Soviets have put vehicles under their 175 Army divisions. Their Infantry is mechanized. We cannot hope to achieve on foot the rapid concentration and dispersion of forces required by nuclear weapons. Nor can we conduct offensive and defensive operations on the wide frontages and depths prescribed by current and proposed doctrine with foot mobility, particularly when the enemy is mounted.

Yet, since mobility *is* relative, we must not only retain but increase our ability to move on foot when terrain or other factors deny the use of mechanized mobility. And we must always have the stamina and ability to *fight* on foot no matter how we move to the point of ultimate decision.

Few persons question the Infantry's historic and continuing requirement for foot mobility but some ask, "How can we afford to mechanize the Infantry?" A better question is, "How can we afford *not* to?"

EDITOR

LETTERS TO THE EDITOR

6th Infantry Photo

Sir:

Congratulations on your "king sized" *Infantry*. I want to join with Infantrymen everywhere in applauding the outstanding contributions that your magazine is making to the Infantry and to the Army.

As I read the [July-September 1958] issue, my attention was particularly drawn to the article, "Infantry Intern," by Lt Col Alden P. Shipley. I was pleased to note that the photograph selected to headline this fine article is one taken over a hundred miles "behind the Iron Curtain."

The picture shows Lieutenant Malone and Private First Class Dingman of the 6th Infantry Regiment in Berlin. This regiment was recently reorganized to form the 2d and 3d Battle Groups of the 6th Infantry. . . .

We are proud of the realistic type of training in which our troops are able to participate, maintaining our high state of combat readiness which is proof for friend and foe alike that the 2d Battle Group, 6th Infantry, is "on guard" in Berlin.

WILLIAM K. KERNAN
Col, Infantry
2d Battle Group, 6th Infantry
APO 742, New York

Patience and Courage

Sir:

The new format and size of *Infantry* are most impressive. It has really taken on the dignity it so richly deserves, representing as it does the man with the rifle. . . .

My reason for this letter is to comment on the article by Lt Col John M. Hinman in the July-September issue. Two points are brought out in his article that we should all remember and apply. I refer to patience and courage—patience enough to let one's juniors make their own mistakes and thereby learn on their own; courage enough to permit one's senior to observe the honest errors of these juniors who are learning and accepting the responsibilities of their rank and assignment.

The greatest compliment a senior commander can hope to receive from his juniors is, "You did your job and you let me do mine."

L. H. JOHNSON, JR.
Lt Col, Infantry
N. G. Advisor Group
Hawaii

Lack "Fire"

Sir:

Just a note . . . to pass on an observation made by Col Warren Hoover, the Acting Chief of Military History, in whose shop I'm located.

He feels that the cover of the Oct-Dec issue of *Infantry* is very poorly done. Specifically he takes objection, and I agree, to the lack of aggressiveness and combat urgency evident in the faces of the soldiers in the

Continued on page 70

A New Infantry Feature

Important information on policies and personnel actions which affect your Infantry career.

YOUR INFANTRY CAREER

Starting with this issue, we shall publish information from Infantry Branch, Officers Assignment Division on assignments, promotions, schooling and other important career matters. Information for the enlisted Infantryman will be obtained from other DA agencies.

Assignment to Short Tour Areas

Continuing and increasing requirements for Infantry officers in the so-called short or "hardship" tour areas are reducing the pool of field grade officers who have not served such a tour since June 1950. To meet the demand in a fair manner, Infantry Branch makes every possible effort to send only those officers who have not completed one of these tours. Unfortunately, a few officers of this group are currently in stabilized assignments. This further reduces the number immediately available for short tours.

Obviously, continuing requirements will make a second short tour inevitable for officers after they reach field grades. In the near future some majors will fall into this category. Second short tour assignments will be made on as fair and equitable a basis as possible.

Assignment Preference Statements

There seems to be generally prevailing opinion among Infantry officers that the Officers Assignment Preference Statement (DA Form 483) is "not even looked at" when reassignments are made. Nothing could be further from the fact. Your preference statement is given careful consideration. However, you must bear in mind that the primary basis for assignment is to meet service commitments. If this can be done in consonance with your desires, all concerned are satisfied: you, the using agency, and the Career Branch. The chances of achieving such a balance are greatly increased if you will complete the preference blocks in such manner that the type of duty you desire matches the location of an appropriate using agency. For example, if you want troop command, select an Army area and station where Infantry troops are located.

Volunteers for Overseas Assignment

At the present time few long tour assignments are available in areas such as Germany and Hawaii. Consequently, volunteer statements for such assignments must be disapproved. Volunteer statements for short tour areas, however, normally can be approved.

Regular Army Augmentation

The Regular Army Augmentation Program of 1957-58 is now complete, and all officers who were selected have been notified. However, there is a new and continuing program under which you may apply for a Regular Army appointment. This new program is covered in AR 601–100 which was scheduled for publication about 1 January 1959 and should soon be available. Of particu-

lar interest to the readers of *Infantry* will be the section of this regulation which covers applications from officers on active duty (including obligated tour lieutenants), former Regular Army officers, and Reserve Component officers in civil life. If you were not selected under the Augmentation Program you can reapply immediately under the new AR.

Since one of the most important sources of future Regular Army officers is from the ranks of young two-year obligated tour lieutenants, all Infantry commanders should be keenly aware of their responsibilities to observe carefully officers in this category and to encourage the outstanding to apply for Regular Army. The new AR 601–100 outlines these responsibilities.

Retention Beyond Retirement Eligibility

Many Reserve Component officers who entered active service during World War II and who will soon be eligible for retirement are asking Infantry Branch, "What are my chances of being retained on active duty beyond twenty years and how do I apply?" While Infantry Branch cannot give a specific answer to this question, information which may be helpful to you is contained in paragraph 11 of AR 135–215. This regulation provides for the retention of a limited number of highly qualified Reserve officers. A Department of the Army board meets in the fall each year to consider for retention officers who qualify for 20-year retirement prior to the end of the succeeding fiscal year. *Consideration of all officers is automatic. You are not required to apply.* Selections are limited to officers who have outstanding records and whose individual qualifications are required to fulfill the immediate needs of the Active Army. If you are selected you will be notified by individual letter approximately six months prior to your retirement date, and if you volunteer, you will be continued on active duty. If you are not selected you will be notified of your scheduled retirement date.

Review of Personnel Records

All Infantry officers are encouraged to review their 201 and efficiency report files in the Pentagon at least once every two or three years. This review is highly important since the information in these files provides the basis for personnel actions which affect your career. Department of the Army uses this information to determine: promotions, assignments, schooling, details, category determinations, appointments, retirements, eliminations, etc. It is important to you that the information in these files is current and correct.

If you are not able to review your own files you may designate, in writing, a representative for this purpose (see AR 640–12 for sample letter). However, officers assigned to The Adjutant General's Office (which includes Infantry Branch) cannot be deputized to perform this mission.

To assist you, or your designated representative, in reviewing your files, Infantry Branch has a receptionist on duty in Room 1E543 during normal office hours, Monday through Friday. The telephone number is LIberty 5-6700, extension 74634. In addition to securing your Branch file for review, the receptionist will arrange for an interview with an officer of Infantry Branch if this is desired. On request the receptionist will also make an appointment for you to review your official TAG 201 file.

If you wish to make your own arrangements to review your official TAG 201 file you may do so by writing The Adjutant General or by phoning the TAGO Records Custodian at LIberty 5-6700, extension 71111 and requesting an appointment. After making the appointment you may review the file by visiting Room 1E672.

Final Semester Plan

College-level education continues to play an important role in personnel actions which affect your Infantry career. If you lack a degree, you should plot a course to continue your formal education through off-campus study. When you reach the point where you can wind up your undergraduate work for a baccalaureate degree in approximately six months of on-campus study, look into the Army's Final Semester Plan. This plan is especially set up to help you obtain your degree. Of necessity, selection for schooling under this program is on a competitive basis. However, every effort is made to place deserving applicants in the program. Remember, if you are selected, you are freed of all Army duties while still drawing the pay and allowances of your grade. See AR 621–5.

Graduate-level schooling in the physical as well as social sciences is currently available to qualified Infantry officers. Recent applications received under this program have been predominantly for the more popular social science courses. This is fine since competition makes for better selection. On the other hand, increasing requirements for graduates in the physical science courses, coupled with comparatively fewer applications, increases the chance of an earlier selection for the program in this field. See AR 350-33 and AR 350-205.

Language Proficiency

Mission, MAAG and general service assignments in foreign countries can be more interesting and rewarding to you and to the service, if you have a working knowledge of the language of the country in which you serve. Today, the increasing importance of the individual officer's role in official contacts with foreign nations, as well as foreign governments, requires that every effort be made to increase foreign language proficiency. So, check your language aptitude. If languages come easy for you, learn more than one. Take advantage of every opportunity offered you by formal Army schooling, off-duty classes, or overseas tours.

Continued on page 65.

A REPORT TO INFANTRYMEN

THE 1958 WORLD-WIDE

Infantry Conference

Here is a brief report on the important World-Wide Infantry Conference held at the United States Army Infantry School, 2-6 December 1958. This Conference is certain to have a major impact on future Infantry organization and doctrine.

LONG overdue, and of great significance to the Army in general and to the Infantry and Infantrymen in particular, was the World-Wide Infantry Conference held at the Infantry Center last month. More than a decade had passed since the Infantry assembled representatives from all major echelons of the Army to take stock of its organizational, materiel and tactical requirements.

The last Infantry Conference of this magnitude was held in 1946 to consolidate the experiences of World War II and to map the future of Infantry as it was viewed at that time. Out of that assembly came a number of important recommendations which modified the World War II Infantry division and its tactics. Specifically, the suggested changes resulted in the addition of a tank battalion, an antiaircraft battalion and a replacement company to the triangular division, and a tank company and 4.2-inch mortar company to the Infantry regiment. These and other

A reception and banquet gave conferees an opportunity to discuss Infantry informally. Left to right: Major General Freeman, Under Secretary of the Army Milton, General Van Fleet, General Clarke and Lieutenant General Young.

recommendations were proved valid in Korea.

During the twelve intervening years since the '46 Conference, major advances in weapons, ground and air mobility, and communication have had far-reaching effects on the Infantry. Developments have moved at such a rapid pace that organizational changes have been made, new weapons systems have been adopted, and tactical concepts have been accepted without an Infantry assembly to unify thinking on Infantry requirements.

The 1958 Conference was convened to take a close look at the Infantry of today and to establish cohesive positions on the organization, materiel and tactics it will require for the future. To orient the thinking of the Conference, the future was considered in three time frames: an immediate and mid-range period, FY 1959-1963; a longer-range period, FY 1964-1968; and a very long-range period, FY 1969 and beyond.

Maj Gen Paul L. Freeman, Jr., Commandant of the United States Army Infantry School, keynoted the task of the Conference in his opening remarks. He called on the conferees to "review ruthlessly what we now have in weapons, communications, vehicles, organization and tactical concepts in order to strike out the outmoded" and urged that the Conference "plunge willingly into the future," with "bold and imaginative thought" to formulate specific recommendations on Infantry requirements. The import of the assembly was reflected in a message to the Conference from President Eisenhower and in an address by Gen Maxwell D. Taylor, the texts of which are included in this report.

Pooled at the Conference was the thinking of approximately 200 conferees. Ranging in rank from the Under Secretary of the Army and four-star general to captain, they represented all major segments of the Army. In addition to key Infantry commanders of the active Army, the assembly included representatives from the National Guard and the Army Reserve, Infantrymen from a number of allied countries, Department of the Army civilian experts, and several distinguished military analysts and correspondents. Also among the conferees were a number of outstanding retired officers. Among the four-star generals present were a former Chief of Staff, former army commanders and active and retired commanders of the United States Continental Army Command. Also present were corps, division and battle group commanders, the Chief of Research and Development, and the heads or representatives of the technical services, service schools and other Department of the Army agencies. To insure that all conferees would be familiar with the latest developments and trends in the many areas of interest to the Infantry and to provide essential background information for later committee work, the first three days of the tightly

THE WHITE HOUSE

WASHINGTON

October 8, 1958

Dear General Freeman:

Please give my greetings to those attending the World-Wide Infantry Conference at Fort Benning.

Having spent many years of my military career as an Infantryman, I can appreciate the significance of this leadership conference. I know that the Infantry arm is an indispensable part of the balanced power required for our national security and for the maintenance of world peace.

With some good hard thinking in the area of Infantry doctrine and equipment, I am sure your conference will contribute to the strength of our Armed Forces.

Sincerely,

Dwight D. Eisenhower

Message from the President of the United States.

scheduled agenda were devoted to presentations by speakers from Department of the Army, Continental Army Command, the Infantry School and other Army agencies.

Throughout these presentations the members of the Conference, most of whom were assigned to one of the 11 committees or to subcommittees, sat in committee groupings. Pertinent portions of the presentations were directed specifically to appropriate committees for consideration.

Immediately after the objectives of the Conference were outlined by the Conference Director, the conferees received an intelligence briefing on current Soviet organization, hardware, tactics and capabilities. This was followed by presentations on limited warfare strategy, nuclear developments and nuclear weapons employment. With this material as a backdrop, the Conference next considered future organization and operational concepts, including reports on the status of ROCID and ROTAD changes and on mid-range tactical concepts for the battle group in offensive, defensive and retrograde operations.

Battle group logistics and communication then came under close scrutiny. Succeeding presentations covered special warfare and such basic Infantry subjects as combat formations, battle drill, physical training, battle indoctrination, filler personnel, Ranger training and the Expert Infantryman Badge. Next on the agenda were briefings on Infantry weapons doctrine. The Infantry School presented its recently developed position on sniper doctrine and covered in some detail Trainfire I, Autofire and Trainfire II. A related discussion of training research rounded out this portion of the program.

The conferees were then given a report on Lebanon operations and received two School presentations on vital Infantry requirements for improved ground and air mobility. The discussion progressed next to combat intelligence and target acquisition, following which the Conference moved out-of-doors for the final presentation—an afternoon-long demonstration of new and developmental Infantry weapons, vehicles and equipment. Tied in with this eye-opening session was an elaborate static display of more than 125 items and a demonstration of the versatile M56 as a platform for Infantry weapons.

The heart of the conference lay in the committee rooms where the conferees sifted the facts and analyzed the detailed requirements of the Infantry for the mid-range and long-range periods. It was here that the collective experience and thinking of some of the Army's most able commanders went into the drafting of the specific recommendations which would be voted upon by the full assembly on the final day of the conference. The committees worked at night after the daily sessions and throughout the fourth day of the conference. Most of the conferees, with the exception of the more senior general officers, were assigned to committees in which their particular knowledge and experience would be most productive. Since the thinking

Col James H. Hayes, Conference Director

of the top-ranking commanders would be helpful to more than one committee, these officers were designated as conferees-at-large or as consultants so they could make their thoughts and suggestions known in a number of areas.

When the finalized recommendations were presented by the committee chairmen in the closing, day-long session, it was apparent that a thorough, farsighted and imaginative effort had gone into their preparation. Most of the findings were indorsed immediately. Some, however, led to spirited discussion but were ultimately passed, a few after minor modification. Several of the recommendations failed to obtain sufficient support and were rejected.

Since most of the committee recommendations include classified material, it is not possible to present detailed conclusions in this report. However, classified copies of an official Conference Report, including the finalized recommendations, will be distributed to Infantry units and other interested agencies in the near future. Meanwhile, we *can* cover some of the broad conclusions reached by the conferees during their deliberations in the committee rooms and on the Conference floor.

The Conference re-emphasized the vital role of the Infantry in both general or limited warfare. It stressed that land combat is the primary interest and responsibility of the Army and that the ultimate control of land still rests with the Infantry. And it reaffirmed that the mission of Infantry continues to be to close with and destroy or capture the enemy and to control the ground on which the enemy stood.

The conferees reiterated that man, with a weapon in his hands, will continue to be the decisive factor on the battlefield. He can be assisted and augmented by machines but he cannot be replaced by a machine. It was noted, however, that improved physical standards will be needed by the Infantry soldier in the performance of his traditional role of sustained close combat in future warfare. The conferees also reaffirmed that the Infantryman must be able to fight in nuclear and non-nuclear wars and that he must be prepared for any eventuality.

CONFERENCE PRESENTATIONS

WELCOMING ADDRESS. Maj Gen Paul L. Freeman, Jr., Commandant, United States Army Infantry School.

CONFERENCE OBJECTIVES. Col James H. Hayes, Combat Developments Office, USAIS, Conference Director.

INTELLIGENCE SUMMARY. Col James W. Strain, Office of the Director of Foreign Intelligence, Assistant Chief of Staff for Intelligence, Department of the Army.

LIMITED WAR STRATEGY. Col James M. Shepherd, Office of Director of Organization and Training, Deputy Chief of Staff for Military Operations, Department of the Army.

CONSIDERATIONS IN THE EMPLOYMENT OF NUCLEAR WEAPONS AND NUCLEAR WEAPONS DEVELOPMENTS OF INTEREST TO INFANTRY. Lt Col Richard W. Healy, Special Subjects Department, USAIS.

DIVISION ORGANIZATION AND OPERATIONS FOR 1961 to 1970 PERIOD. Col Lee Wallace, Director of the Department of the Infantry Division, United States Army Command and General Staff College.

FUTURE ORGANIZATIONAL AND OPERATIONAL CONCEPTS FOR INFANTRY. Col Charles T. Horner, Jr., Chief, Combat Developments Office, USAIS; and Lt Col Albert J. McWade, Doctrine and Organization Section, Combat Developments Office, USAIS.

CURRENT STATUS OF ROCID-ROTAD CHANGES. Col John P. Jones, Jr., Chief, Combined Arms Branch, Doctrine and Requirements Division, United States Continental Army Command.

MID-RANGE TACTICAL CONCEPTS: BATTLE GROUP IN DEFENSE AND RETROGRADE; BATTLE GROUP IN OFFENSE. Lt Col Edwin C. Gibson, Command and Staff Department, USAIS.

BATTLE GROUP LOGISTICS. Lt Col William E. Neidner, Command and Staff Department, USAIS.

COMMUNICATION IN BATTLE GROUP. Col Julian H. Martin, Director, Communication Department, USAIS; and Maj William A. Van Dyke, Communication Department, USAIS.

SPECIAL WARFARE. Lt Col Irwin A. Edwards, United States Army Special Warfare Center.

BASIC INFANTRY SUBJECTS. Col John T. Corley, Director, Ranger Department, USAIS.

COMBAT FORMATIONS; BATTLE DRILL. Capt Richard B. Stough, Ranger Department, USAIS.

TRAINFIRE I; SNIPER DOCTRINE. Capt Allan A. Buergin, Weapons Department, USAIS.

AUTOFIRE. Capt Marvin C. Shelton, Jr., Weapons Department, USAIS.

TRAINFIRE II. Maj Edward J. Collins, Weapons Department, USAIS.

TRAINING RESEARCH. Lt Col George R. Stevens III, Chief, United States Army Infantry Human Research Unit; and Doctor Meredith F. Crawford, Director, Human Resources Research Office.

LEBANON OPERATIONS. Brig Gen David W. Gray, Assistant Division Commander, 24th Infantry Division.

BATTLEFIELD GROUND MOBILITY. Lt Col James F. Nabors, Ground Mobility Department, USAIS.

BATTLEFIELD AIR MOBILITY. Lt Col John W. Marr, Airborne-Air Mobility Department, USAIS.

COMBAT INTELLIGENCE AND TARGET ACQUISITION FOR BATTLE GROUP. Maj William B. Fowlkes, Command and Staff Department, USAIS.

NEW INFANTRY MATERIEL DEVELOPMENTS. Col Henry B. Kunzig, President, United States Army Infantry Board.

DEMONSTRATION AND DISPLAY AT HOOK RANGE: M56 DEMONSTRATION. Capt Raymond J. Grove, Weapons Department, USAIS; and 1st Lt Manfred Kelman, Weapons Department, USAIS.

Conference Pictorial

This giant geodesic dome, located near the conference headquarters, housed a Quartermaster exhibit.

Under Secretary of the Army Hugh M. Milton II, seated here with Commandant Maj Gen Paul L. Freeman, was the principal speaker at the conference banquet.

Among the conferees were guests from the United States Marine Corps and several of our free-world allies.

The numerous static displays at the Conference included a jump belt which is designed to propel the individual Infantry soldier.

Conferees were given an opportunity to witness the mobility and accuracy of the 106mm rifle mounted on the M56.

A new-type dehydrated meal was prepared quickly and easily for the more than 200 conferees by a few enlisted attendants.

Using only a pitcher, canteen cup and containers of hot water, each untrained attendant prepared and served 25 tasty meals.

Like most conferees, Maj Gen McNamara, Quartermaster General, was interested in the aerial-delivery and airborne equipment displays.

Among the items included in the Quartermaster exhibit was this saucer-shaped free-fall container.

Conferees were especially interested in the "flying jeep" and vertical-take-off aircraft displays.

CONFERENCE COMMITTEES

COMMITTEE 1. DIVISION ORGANIZATION AND OPERATIONS FOR 1959-1968 PERIOD

CHAIRMAN: Brig Gen Ben Harrell

PURPOSE: To consider the organizational and operational concepts for the Infantry division in the mid and long-range periods.

SCOPE: The committee will include but not be limited to the considerations of mobility, fire support, surveillance, and communication as they affect the organization and operations of the Infantry division in the mid and long-range periods.

COMMITTEE 2. INFANTRY OPERATIONS IN THE LONG-RANGE PERIOD

CHAIRMAN: Brig Gen Autrey J. Maroun

PURPOSE: To analyze various projected operational and organizational concepts as prepared by Army agencies for the long-range period in order to determine the optimum concept.

SCOPE: The committee, within the framework of the guidance provided by Department of the Army and USCONARC, will examine future Infantry operational and organizational concepts as visualized for the long-range period (1964-1968). The analysis will be confined to the levels up to and including brigade. Consideration of higher level units is not precluded, however, because it may be necessary in order to place deliberation in a proper perspective. In addition, consideration should be given to both limited and general war.

COMMITTEE 3. MIDRANGE TACTICAL CONCEPTS

CHAIRMAN: Brig Gen Charles W. G. Rich

PURPOSE: To analyze the tactical concepts projected for the Infantry division battle group in the mid-range and early long-range periods in order to determine the soundness of those concepts and to indicate corrective action required, if any.

SCOPE: The committee will include but not be limited to the consideration of the impact of varying degrees of mobility, including foot, vehicular, and aerial means; fire support means, including the habitual employment of low yield nuclear weapons; mechanical means of surveillance; command and control; employment of company and smaller units in semi-independent operations; and the degree of dispersion which can be accepted in offense, defense and retrograde operations. In all deliberations, the enemy will be considered to have capabilities equal to or greater than that of friendly forces.

COMMITTEE 4. BATTLEFIELD MOBILITY

CHAIRMAN: Brig Gen David W. Gray

PURPOSE: To analyze the inherent mobility of the ROCID battle group in order to ascertain its adequacy for the mid-range and early long-range periods and to determine corrective actions necessary for the future.

SCOPE: Includes (but need not be limited to) an analysis of the commitments of the United States Army and the varying types of conditions which will be met by the Infantry in both limited and general war situations. Specifically considers possible new requirements for battlefield mobility resulting from the increased dispersion created by the existence of tactical atomic and improved surveillance techniques. Correlates present ROCID battle group mobility with that which may be required so as to isolate the corrective action required.

COMMITTEE 4A. BATTLEFIELD GROUND MOBILITY

CHAIRMAN: Brig Gen Reuben H. Tucker, III

PURPOSE: To analyze the ground mobility of the ROCID battle group in order to ascertain its adequacy for the mid-range and early long-range periods and to determine corrective actions necessary for the future.

SCOPE: Includes (but need not be limited to) an analysis of the varying types of terrain conditions likely to be encountered by the Infantry in both limited and general war situations. Specifically considers possible new requirements for ground mobility resulting from the increased dispersion created by the existence of tactical atomics and improved surveillance techniques. Correlates present ground mobility with that which may be required so as to isolate the corrective action required.

COMMITTEE 4B. BATTLEFIELD AIR MOBILITY

CHAIRMAN: Brig Gen Chester B. De Gavre

PURPOSE: To analyze and evaluate the current and projected battlefield and strategic air mobility capability with particular emphasis to their effect on Infantry operations during the mid-range and long-range periods.

Continued on next page.

After the role and missions of the Infantry had been spelled out, specific recommendations were made concerning the organization, weapons, equipment and tactics needed to fulfill these responsibilities. Organizational concepts were recommended for the mid-range and long-range periods. These concepts, while based on Department of the Army and USCONARC guidance, were specifically geared to the survival of the Infantryman on the nuclear battlefield and to the defeat of progressively increasing Soviet ground combat capabilities. Emphasis was placed on smaller, lighter units with greater firepower, improved mobility and increased potential for independent action. The preeminence of the squad leader as the smallest unit commander was stressed.

The conference made both general and specific recommendations on the weaponry required now and in the future. It went on record that nuclear weapons must be available to units at lower echelons. To combat known Soviet strength in armor, it recommended an improved family of antitank weapons.

Major conclusions were reached concerning the Infantry's vital requirements for ground and air mobility. Recognizing the immediate need for means to concentrate and disperse forces rapidly, the Conference recommended that Infantry personnel carriers be made organic to the battle group and that light, tracked, thinly armored weapons platforms and carriers be provided for Infantry crew-served weapons. For the future, it concluded that the Infantry must have vehicles with zero ground pressure—perhaps of the flying jeep type—which would largely free the Infantryman from the limitations imposed by terrain.

To meet the problem of effective control in fast-moving and widely dispersed operations on the nuclear battlefield, the conferees recommended that greater emphasis be placed on the use of radios for communication, with less reliance on wire. They concluded that the Infantry must have radios with sufficient range to permit control of the entire battle group area of operation, and that the individual soldier must have a helmet-type radio to improve control and reduce

the confusion to be expected in nuclear combat. The recommendations also included security devices which could permit habitual voice transmission.

In view of the wide frontages anticipated in the future, it was concluded that gaps between units must be covered by surveillance devices. It was recommended that our scientists look for more effective surveillance means, possibly employing principles other than radar.

The Conference recommended that supply functions be concentrated under centralized control in a support group, that maintenance be functionalized and that greater reliance be placed on preplanned supply packets which could be delivered by all available means, including missile-type projectiles.

Numerous recommendations were made concerning the training of the Infantry soldier. The conferees called for the establishment of procedures which would permit the training of skilled technicians concurrently with the development of new materiel so that both would be ready for employment simultaneously. They asked also that doctrine and training literature likewise be prepared concurrently with the development of weapons and equipment.

It was recommended that Ranger-type training be extended throughout the Army training system to utilize the proven value of this training in the development of better soldiers. A modification of safety requirements was called for to eliminate unnecessary restrictions which prevent realistic training.

The conferees also asked that more attention be given to the Expert Infantryman Badge, and recommended revised procedures for conduct of the badge tests which would permit the Infantryman to earn "legs" on the award over a period of a year.

Before adjourning, the conferees recommended that another worldwide Infantry Conference be held in 1963 unless major developments or changes should require an earlier conference.

Infantry plans to present an analysis of unclassified conference recommendations in a future issue. Other details will be published as security classifications are lifted.

SCOPE: Includes (but need not be limited to) an analysis of the factors which will influence the character of battlefield air-mobile operations; organizational, training and materiel requirements for battlefield air-mobile operations; measures required to achieve a decisive air-mobility capability; and the effectiveness of strategic aerial deployment operations.

COMMITTEE 5. COMMUNICATION IN THE INFANTRY

CHAIRMAN: Maj Gen Louis W. Truman

PURPOSE: To analyze the Infantry battle group communication requirements and make recommendations designed to provide an efficient command and control means for the present and future.

SCOPE: The evaluation of the Infantry battle group communication system, to include known deficiencies at each echelon of command and action that must be taken to correct the deficiencies; communication trends and developments which will affect the Infantry battle group communication system; and requirements for modifications or new equipment.

COMMITTEE 6. NUCLEAR WEAPONS EMPLOYMENT

CHAIRMAN: Maj Gen Harvey H. Fischer

PURPOSE: To investigate certain areas of nuclear weapons employment to determine the adequacy of doctrine for the mid-range period and recommend any necessary corrective action.

SCOPE: Will consider current doctrine in the light of experience gained in various recent CPXs and field exercises to isolate deficiencies (doctrinal or training) which require correction as a contribution to efficient operational use of nuclear weapons.

COMMITTEE 7. COMBAT INTELLIGENCE — BATTLE GROUP

CHAIRMAN: Maj Gen Martin J. Morin

PURPOSE: To analyze the major intelligence problem areas in the Infantry battle group that may be anticipated in the mid-range period in order to determine the corrective action necessary for the future.

SCOPE: Will include (but is not limited to) the potential deficiencies or problem areas of the Infantry division battle group based upon current combat intelligence requirements, capabilities, equipment and techniques projected through the mid-range period.

COMMITTEE 8. COMBAT LOGISTICS — BATTLE GROUP

CHAIRMAN: Brig Gen Curtis J. Herrick

PURPOSE: To consider and reach conclusions on major logistical problem areas in the Infantry division with emphasis on the battle group.

SCOPE: Will include (but not be limited to) the potential deficiencies as problem areas based upon current combat logistical requirements, capabilities, equipment, and techniques projected through the mid-range period.

COMMITTEE 9. SELECTED BASIC INFANTRY TRAINING

CHAIRMAN: Maj Gen Sidney C. Wooten

PURPOSE: To analyze and evaluate various basic Infantry training areas in order to improve the concepts of employment both now and in the future.

SCOPE: Will consider Ranger training; combat formations, battle drill and control of small units; physical training, battle indoctrination, Expert Infantryman Badge and fillers.

COMMITTEE 10. TRAINING RESEARCH

CHAIRMAN: Maj Gen Earl C. Berquist

PURPOSE: To analyze ways to obtain maximum return to the Infantry from the training research effort.

SCOPE: Will consider possible ways in which the Infantry can facilitate the conduct of training research, areas for future training research concentration, and ideas for the conduct of training research to coincide with the materiel and organizational developments for the future battlefield. Discussions will also be concerned with the possibility of utilizing certain research techniques for improvement of day-to-day Army training.

COMMITTEE 11. FUTURE CONFERENCE AND DISSEMINATION OF FINDINGS

CHAIRMAN: Maj Gen John A. Dabney

PURPOSE: To determine the most effective means of disseminating the conclusions of the conference and to recommend a time for a future conference.

SCOPE: Will consider the audiences to which the conclusions should be presented, the media through which each audience may be reached and the requirements for a future conference.

FROM THE CONFERENCE FLOOR

Space limitations and security classifications do not permit detailed coverage of the comment and discussion which took place on the floor of the Conference. However, the few items presented here indicate the kind of thinking that was expressed by the conferees following each of the formal presentations and committee reports.

Extemporaneous Remarks

By Gen J. Lawton Collins (Ret)

I WAS indeed reluctant to say anything because frankly some of what I have heard has been over my head. I must admit that I'm getting older and perhaps outmoded. I do want to say how much I've enjoyed being here. I appreciate the opportunity to come back to Benning to see all these fine young officers and to hear this very interesting discussion from the platform. And also to hear again people rise in the audience and challenge the instructors. I always think that's a good sign.

Now before I make a few comments on what I have heard, let me tell you that I've always been skeptical of the person who's too much wedded to the past. . . . So I say, don't pay too much attention to older people like me who probably may be too much wedded to the past.

There are three main points though that have occurred to me as I listened to this look into the future. By no means do I challenge your view, but I do hope that some of the things which have been expounded will be subjected, as I feel sure they will be, to field tests before they're adopted.

Gen Collins speaks from the Conference floor.

Now with that note in mind, I want to mention the three areas about which I have been puzzled. The first of them is deploying our units on such very great frontages. I hope you will look at the vulnerability of these organizations to infiltration. On these extended frontages, I'm sure you'll all agree that you can never stop a good infiltrator by fire alone, particularly at night, in fog like we had here this morning, or in artificially created darkness. So I hope that this will be one of the things you will look into pretty carefully.

The second point that I wonder about is the extending down even to the platoon of heavier fire support weapons that have to be carried, not by men, but by vehicles. I believe that our tests have shown that men can withstand the blast effects of a nuclear weapon better than vehicles. You saw the picture of what results to vehicles in the event of an atomic airburst anywhere near them, and it just seems to me that it would be well worth checking whether or not some of the fire support that you are now trying to give these very subordinate units couldn't still be gotten from our marvelous Field Artillery and also from air support—or if not from air support, then from rocket or guided missile support which is not in the hands of platoon leaders or company commanders, but is farther back to the rear, with the essential observer up front with your frontline men. In other words, I can't help but feel that you are packing up, right into the very forward area which is going to be plastered with enemy artillery, a lot of equipment that is not going to live.

Now the third point is perhaps the most important one of all. This equipment which is being developed is, of course, wonderful, but it takes men to handle that equipment, and don't for a minute lose sight of the fact now as you put more in the hands of these young company commanders and platoon commanders up front, you've got to create some super-duper men to handle this equipment effectively. It's going to take men, as it always has done, to make good Infantry. There's nothing more requisite than top-flight frontline leadership, and it is not found on every tree. When you give to a company commander practically the same responsibility we gave to a battalion commander in the last war, add all of this technical equipment and then spread out his company over a tremendous frontage, you are putting on that youngster a weight of responsibility that has never before been put on a young officer under anything resembling these conditions. And this young fellow has to withstand the turmoil of atomic conflict.

So I assume that these points will be checked in field tests. I feel that it might be found that you can get just as effective support without jamming so much equipment into the forward battle area and without putting such terrific responsibility on your junior commanders. Use the artilleryman or the rocketman who is back out of the very center of this holocaust of combat, but who has an observer up front with good—really good—communication! And may I say that I thought your discussion of comunication was probably the best single thing that I've heard here. Again, with this emphasis on dispersion of units, the unit isn't going to be any more effective than the control, and control demands top-flight leaders and good, reliable communication.

Brig Gen Stanley R. Larsen
Assistant Commandant, U.S. Army Infantry School

Discussion on Mechanization

BRIG GEN LARSEN: ". . . Having talked to many of you in the last few days on ground mobility and mechanization, I have been filled with enthusiasm that so many people have questions about mechanization. . . . Recently, a very senior Army officer asked, in effect, the following: Why does the Infantry want to mechanize its crew-served weapons? You did all right with your mortar in World War II. Why do you suddenly feel that you have to shoot and scoot with it today — or tomorrow? Why shouldn't you be able to hand-carry the 106 cross-country? Why do you need cross-country mobility for such weapons?

"Gentlemen, when we have thinking in the Army that so strongly questions the wisdom of the Infantry's need for cross-country mobility and mechanization, I think we ought to have it discussed here. Those of you who question the wisdom of mechanization ought to express yourselves. . . ."

GENERAL DAHLQUIST: "I will take up General Larsen's challenge very briefly. I'm all for mechanization. But I suggest you consider these factors: *Money* (we might get it — but I doubt it) and *men*. How many guys will it take to maintain all these tracked vehicles? And where are you going to get them? . . . When the Board recommended approval of it the M56 self-propelled antitank gun and said it would work, I said let's put it on the shelf and not produce it. I was turned down. . . . The Airborne division had to have an antitank capability. Well, boys, producing that thing doesn't give you an antitank capability because you can't get the planes to carry it. It takes one plane to one gun. I think our answer is something like the mechanical mule . . . but don't try to improve it. . . . The simpler you keep it, the less maintenance it requires and the lighter it is. Don't put heavier batteries on it and don't give it four-wheel suspension or an automatic transmission. . . . Furthermore, I don't believe the jeep we have today is one bit better than the jeep we had in World War II. What does it do that the old one didn't do? But it costs more and weighs more. . . . We can keep on adding things that take more maintenance but I tell you boys, the bodies to do it just aren't going to be there."

MAJ GEN FREEMAN: "I have a question to ask General Dahlquist and I do this because I see General Trudeau sitting here and General Willens, both of whom have a part in the Infantry's problem of mechanization. We have a very interesting film, "A Sharper Sword and a Stronger Shield," that's being shown every night in the Conference billeting area. Also, we have had a presentation — a very fine one — which showed . . . that of the 175 Soviet divisions, the majority are mechanized, motorized, armored, or whatever you choose to call them. Now here is a country whose productive and mechanical ability we've seen fit to deride until only a few years ago. Now we see that the Soviets have the ability to put a vehicle under almost every one of their soldiers. Apparently, unless we are being misled, the Soviets can maintain, operate and fuel those vehicles. Why then, should there be any doubt, skepticism or hesitation? Why does a great mechanical, industrial, and productive nation like ours still have the doughboy marching at 2½ miles per hour — lugging the cumbersome, unwieldly, heavy equipment, weapons and communications that we require on the battlefield today. Now I'm not arguing at this time whether we should or should not have every Infantryman riding in a vehicle. It's for the conferees to decide how many vehicles we need and just what types they should be. But I ask, if they can do it, why can't we?"

Gen Dahlquist (left foreground) listens to the discussion on mechanization.

BRIG GEN LARSEN: "I'd like to add one more point if I may. The presentations that have been given here by the School have been based, in large part, on guidance from higher headquarters. . . . The employment of the ROCID Division as portrayed in the last two or three days has been the decision of the highest authority in the Army. I put to you — do you expect to be able to fight this division on its frontages and in the forms that are to be expected of it in 1965 on a 2½ mile an hour basis?"

Opening Remarks

By Maj Gen Paul L. Freeman, Jr.

In 1946 under the dynamic direction of General Mike O'Daniel, Benning conducted a conference similar to that which you are attending. That conference had as its primary objective the application of lessons of World War II to the improvement of Infantry weapons, organization and technique. Principal among the recommendations made by the conferees and accepted by the Department of Army were:

The addition of a medium tank battalion and an antiaircraft automatic weapons battalion to the Infantry division.

The substitution of a 4.2-inch mortar company and a medium tank company for the regimental cannon company and antitank company.

Increase in Artillery howitzers to six per battery and recognition of Army Aviation capabilities.

Recognition of the need for an armored personnel carrier organic to the Infantry.

Many of us here profited by these augmentations of firepower and increases of personnel strength during the Korean conflict. We were in high praise of the beefed-up regimental combat team nearly 5000 strong. It provided great flexibility in the organization of sub-combat teams at any level down to the platoon. It could accommodate reinforcing units up to two battalions without strain. It could fight independently when separated from supporting units. Most of all, it could still fight effectively after sustaining losses of 30 to 40 percent in personnel and equipment.

Likewise, the 1948-1950 Infantry division was well able to take care of itself in sustained combat in Korea on frontages almost as wide as those that we now visualize for the future.

True, the Korean war was a peculiar war—in many ways, a retrogression to the primitive after World War II. However, deficiencies in enemy strength in artillery, in air power, and in better mobility which might have put our new organization to a more severe test, were more than compensated for by adversities of terrain, weather and restrictions of a political nature.

I mention our satisfaction with this heavy organization in some detail because of the contrast with our Infantry division of today. The conferees of 1946 did an outstanding job in improving our combat effectiveness for the period they could foresee.

Understandably, the revolutionary concepts in national strategy and ground warfare that now confront us could not have been anticipated. Unseen was the strategy of deterrence and retaliation that has led to a type of Army employment for which the heavy, cumbersome, slow-moving division and regiment of only five years ago are no longer suited. In this dramatic era of atomic plenty and scientific achievement, with the advent of low-yield nuclear weapons available for battlefield employment and with equal attainments in surface and air mobility, a new look at the immediate future and beyond is required if we are to realize the full potential of Infantry.

It is for this purpose that we have asked our foremost Infantry leaders and those representatives of other arms and services to meet with us in another Infantry Conference.

During the few days that you will be here, you will be given presentations by the Infantry School, the Department of Army, Continental Army Command, Command and General Staff College, and certain individuals on: the current situation; the latest doctrinal concepts of organization, tactics and methods; weapons; mobility, both ground and air; communication; and logistics and training. Pressing problems will be described to you. There will be some demonstrations and displays.

With the benefit of these briefings and your own experience and knowledge, it is our hope that you will assist us to resolve the problems and formulate specific recommendations as to the course that Infantry should take in the period from now through 1965. To do so will require bold and imaginative thought, and a willingness to plunge into the future, abandoning where necessary outmoded concepts of the past.

As you know, most of you are assigned to one or more of the eleven committees that have been formed to investigate specific subjects and to submit recommendations. These recommendations will be presented to the Conference at large and if adopted, will be processed through channels to be studied as the basis for changes in doctrine, equipment, organization and methods.

First of all, for our investigations we require a point of departure. Where do we stand now? What might be required of us? What will we need to do the job?

Admittedly, it is not within the purview of the Infantry School to examine national defense policy and war plans. These subjects will be developed by speakers from Department of the Army and USCONARC. However, we at the School who are charged with formulating Infantry doctrine must face the facts behind the guidelines we are given. We cannot logically work in a vacuum, oblivious of the restrictions imposed by national strategy and available resources of men and money.

We now have an Army barely adequate in numbers to

meet the many missions and requirements assigned it. What combat units we can maintain will serve little purpose in a war of the future of any size unless they are ready forces—fully equipped, trained and hardened. We have had small armies before, but probably not with so many frustrating problems, including those of funding, equipment modernization and developing new equipment, maintaining overseas deployment on such a large scale, training short term soldiers, and, most of all, with a zero time factor for reinforcement and mobilization. We find ourselves in an endless cycle of creating new units, taking them through their graduation maneuvers and then seeing them vanish as term of service expires, or to meet the demands of overseas requirements. Then, we commence the cycle all over again. These frustrations dictate expedients and short cuts of every type to insure maximum potential combat effectiveness on an as-is-now basis. Training must be simplified. Time no longer permits perfecting the individual soldier for his more complicated duties. Trainfire and Battle Drill are recent partial solutions to this problem. Also, we must recognize a more intelligent soldier who can learn in a shorter period of time. Equipment must be more rugged and simple to operate and maintain. The M14 rifle, which replaces four other weapons, is a step in this direction, as is some of our newer communication equipment. Where equipment cannot be simplified, we must develop "hard to train" technicians from sources other than troop schools.

As for what might be required of us, the Chief of Staff has stated repeatedly that while we have a role in general war, another of our principal missions is to prepare for the more likely smaller wars. Wars in the peripheral areas ranging from a show of force to organized conflicts such as Korea. Situations that require an adequate, measured application of force—Infantry-type wars designed to destroy the enemy on the battlefield and not the friendly nation that we seek to preserve. We must develop and maintain compact, hard-hitting forces capable of rapid movement from the U. S. or an overseas base to a peripheral area of potential or actual conflict to stamp out a spark before it becomes a bonfire. Forces light in equipment and manpower, but heavy in firepower, agile in movement and capable of sustained action pending reinforcement by heavier units and slower transport.

At the same time, we must continue to maintain heavier formations in Western Europe to deter the shock of an incident designed to take over by default.

Our requirements for units such as these are in most instances well recognized. Quite obviously, we need a rapid means of transport to the battle area, and while the provision of suitable air or sea lift cannot be resolved by this Conference, at least we can advocate equipment that is air-transportable, and techniques built around such equipment. Another pressing requirement is battlefield mobility, principally mechanization of the Infantry. First, armored personnel carriers, at least for all assault forces; later, fighting vehicles.

In communication we believe that we must rely on radio systems to the nearly total exclusion of wire in the fast-moving situations that we envisage.

These are only a few of our more obvious problems. Problems that must be solved within almost inflexible parameters of manpower, dollars and lead times. Problems that must be solved by imagination and courageous decision. They can be solved only by acceptance of new concepts that have not been proven and that combat-experienced Infantrymen might be reluctant to accept—concepts based on lighter, smaller units that must rely on heavier hitting power and greater agility, to provide their staying power, and attack formations and methods that more resemble a reconnaissance in force than a general advance. Tactically, we believe we must and can operate way out on a limb. You will hear some of our ideas later. We solicit yours.

In solving our problems here, we will make slow progress if we consider atomic firepower only as an extension of conventional firepower. Merely to append it to the weapons and methods of the past will accomplish little. The same precept holds for increased mobility. We cannot afford both the old and the new. For each new item of equipment adopted, we must give up some of the old; for each new role assigned a soldier, we must give up the one he now performs.

If we are to have more vehicles, better communication, heavier supporting weapons, the operators must come from present jobs, perhaps the rifle squads. Which do we need most?

In summary, gentlemen, we must ruthlessly review what we now have in weapons, communication, vehicles, organization and tactical concept in order to strike out the outmoded. We must have a concept which seeks decisions on the battlefield, not blind destruction or mere survival. The concept must find the balance among the limitations imposed by money, by personnel ceilings, and by the state of our technological advances. This is the problem we all face. What priorities will you have? Where will you distribute the men and where will you find them? To which type of project will you assign the available money? What, in fact, are the battle-winning items and concepts as distinguished from those that are less essential?

Some of our problems would be quite simple of solution were it not for the restrictions that I have mentioned. Others related to doctrine and methods are more profound and will require a great deal of analysis. While those pertaining to items of equipment will require an evaluation of facts and figures, priorities and a preference for this now or something better later.

We are anxious to have your thoughts and ideas and to learn your reaction to our proposals.

This is an *Infantry* Conference. Quite naturally, we are primarily concerned with the Infantry, its problems and its future. However, we are not unmindful that all that we are discussing here involves the Army as a whole—an Army that in these days must stand fully unified and make itself heard.

The doctrine of combined arms is far more important for the future than it has ever been. We are grateful for the superb support that has always been given the Infantry in combat by the other arms and services. In these days it would ill become any one arm or service jealously to seek to improve its potential at the expense of the unified whole. Nevertheless, there are gray areas overlapping and duplicating the role and function of each arm in matters of weapons, devices and vehicles which can lead to rivalry, waste, and delay in the procurement of improved materiel unless the common interest is allowed to prevail. I wish to make it clear to the Conference at large, and to the representatives of other arms and services in particular, that we at the Infantry School have no intention of competing for or infringing on the requirements of other branches of the Army. More than any other branch, we of the Infantry have reason to realize that we cannot do the job alone. But to do our own part we have certain valid requirements on which we intend to be heard.

Meeting the Challenge

By Gen Maxwell D. Taylor

IN THIS era of military change and growing complexity, tomorrow belongs to soldiers who refuse to be awed or confused by it and who resolutely rise to meet its challenge. Much of the complexity and confusion has been generated in the striking accomplishments of the technology of our age. By their very nature, these accomplishments sometimes tend to cloud some of the basic problems of our national defense, particularly those relating to combat on the earth's land surface—the area of primary interest and responsibility of the Army, the ultimate control of which rests upon the Infantry. This truth has been effectively expressed by General Omar Bradley, who observed that, "No victory has been assured until the man on the ground takes possession by his physical presence on the enemy's soil."

From this fact may be readily derived the over-all objective of the Army in this or any other period: that is, to contribute to the security of the Nation as a member of our tri-Service team by providing adequate forces for prompt and sustained land combat in any type of war. A concomitant objective of importance which I will mention only in passing is to furnish an adequate surface-to-air missile defense of the United States and our forces overseas.

From this line of departure, let us move to a consideration of the Army's future roles, with emphasis on the function of the Infantry. From this consideration, we can determine the requirements for the Army and its Infantry to meet the future successfully.

At the outset I would like to say that the potentiality of atomic weapons tends to cast a shadow over the value of historical analogy for the analysis of future warfare. However, regardless of this factor, in my judgment certain military fundamentals will continue to hold true. Firepower, mobility, communications, and well-trained men employed in the proper combination at the decisive point of combat remain the keys to success in battle. Further, these ingredients of victory must always be combined in proper proportion by trained judgment and with imaginative foresight.

Two facts are salient in any consideration of tomorrow's challenges. First, the Sino-Soviet bloc confronts us with a political and military system whose standards and announced objectives are violently opposed to our ideals and principles and to those of the Free World. Second, they will use all tactics and weapons which favor the attainment of their ends. Thus, in the event of war we must prepare for the use of atomic weapons to offset Communist numbers as well as to defend ourselves against atomic attack.

The Soviets, like the United States, have equipped themselves with nuclear weapons and both sides appear to have the capability of destroying each other in case these weapons are used without restraint. Although that sober conclusion suggests that neither side would deliberately initiate general atomic war, it does not impose restraint upon the use of lesser aggression as an instrument of Communist policy. Rather, it appears that the Communist bloc will continue to wield this instrument of limited aggression with increasing truculence under the cloak of fear imposed by mutual deterrence. We have seen ample evidence of this trend in the series of Middle Eastern crises and in the Far East, reminding us that in an age of atomic plenty the Soviets intend to throw their military weight about the world for the achievement of their ends.

Under these circumstances, the Red Army and the ground forces of the satellites become potent agents in periods of tension and potential participants in actual military conflicts of any dimension. These forces are combat-ready, equipped with the latest types of materiel and trained in mobile tactical concepts, and supported by large tactical air armies. Throughout the world, these forces are a readily-understood symbol of Communist strength. Particularly to the people of many under-developed areas, these forces give impressive proof of the capability of the Communist system to produce and equip the modern army as an indispensable element of national power.

As an instrument of the Communist politico-military strategy of eroding the Free World position, these powerful forces constitute a strong support for tactics in a period of tension—the threat or direct application of calculated, positive military force at times and places of their choice.

From these considerations there arise two significant operational functions for the Army to perform. These are: (1) the maintenance of overseas forces for deterrence of aggression, or prompt resistance to aggression if deterrence fails; and (2) the maintenance of a mobile combat-ready strategic force based in the United States for the rapid reinforcement of forward deployed forces or for the timely suppression of situations short of general war.

As you will note, these functions extend across the entire spectrum of the military threats confronting us, from the "worst possible" but less probable case of general atomic war, to the more likely scale of limited war and the current realities of a period of tension.

Immediately following the Korean War, the Army recognized the changing nature of the military threat and set about to meet it. Following a period of self-evaluation there ensued an evolution in organization, concepts and doctrine, so compressed in time as to verge on the revolu-

tionary. This readjustment has been made on a deliberate basis of calculated risk, with full recognition that much of the modern materiel and supporting means necessary to support our new concepts are not yet available in sufficient quantities. The need for change had to be balanced against the requirement for keeping up our guard during a period of serious world tension. However, the decision to act was taken because the lead-time for the understanding and acceptance of new ideas can often be a far greater problem than that for the production of the complex new hardware required to realize a concept. Fundamental to this need for change was the early attainment of that optimum combination of firepower, mobility and communications, to which I earlier referred, as the products of our expanding technology became available to us. If the past can tell us anything, it is that history is studded with the gravestones of those nations whose armies failed to achieve that proper combination of these vital ingredients of victory necessary to obtain superiority over the enemy.

As a result of the Army's effort to remodel itself at an accelerated rate, much discussion has arisen at all levels regarding the future functions and roles of the combat arms. Our modernization program has properly emphasized greatly improved firepower and communications, enhanced strategic mobility, new forms of battlefield mobility and the means of protection from nuclear effects. From this emphasis on complex equipment, some military critics have drawn the inference that the future of the Infantry may be limited. I would like to say that nothing could be further from the truth, if the essential nature of the Infantry's function is kept clearly in mind. This function for the future, as well as today, remains to close with the enemy and to destroy or capture him, driving him from his position and securing the ground wrested from him. In so doing, the Infantry requires great versatility. The same Infantry mounted in armored carriers and teamed with tanks for mobile operations must also be ready to move in aerial vehicles about the battlefield. But regardless of how the Infantry moves or maneuvers, it shares with no other arm the ultimate mission of sustained close combat with the enemy. Thus, to those who would say, "The Queen is dead," I would reply, "Long live the Queen!"

The leadership of the Infantry must keep this basic truth as a guiding principle, for it will serve to illuminate and clarify many issues relative to the role of the Infantry as our organizations, concepts and weapons continue to evolve. In the final analysis, all our efforts toward improvement seek but one principal end. It is to provide the Infantry, as the versatile basic arm of close combat, with a superior differential of sustained, mobile combat power, capable of delivery at the decisive point in time and space, under any and all conditions of combat.

In discussing our strategy, I have often had occasion to speak of the role of the sword and the shield. If we should have to face general war, the shield is those deployed forces which meet the enemy's thrust on the ground and in the air and blunt or parry it in preparation for the riposte of the sword of nuclear retaliation. But if it is necessary to face situations short of general war these roles are reversed. Under the restraints of mutual deterrence, our atomic retaliatory sword becomes a shield, holding in check atomic aggression by the enemy. The ground and tactical air forces become the strategic rapier to destroy localized aggression by the precise, selective application of force, thus preventing its spread into that general war which is our purpose to avoid. It is in these less understood areas of limited war that the significant capability of the Army stands out. And, it is here that the Infantry plays an essential part in contributing to the distinguishing characteristic of the Army—prompt, sustained combat on land.

Most of the Army combat units in both the sword and the shield are composed of Infantry units and their support elements. In those shield forces deployed abroad, the Infantryman stands as a visible symbol of our intent to deter aggression and to resist it shoulder-to-shoulder with our allies should it come. His mere presence, even in limited numbers, is often sufficient to achieve the desired effect. Berlin is an outstanding example which comes readily to mind, where two Infantry battle groups symbolize the power and determination of the United States. So long as they remain, Berliners and the rest of the world are assured that the United States means to resist aggression.

In those Army forces comprising the limited war sword, the Infantry components of STRAC are both the point and the cutting edge. Recent events have demonstrated the role of Infantry in our STRAC concept. Infantry's ready adaptability to prompt strategic deployment by air or sea lift, and its capability for rapidly entering into action under the widest range of climatic and geographical conditions are attributes suited to its part in our mobile strategy.

For the future, added means of firepower, battlefield mobility and increased staying power will be necessary to retain the essential versatility of the Infantry. It must receive modern arms and equipment characterized by ease of air and sea transportability. Strategic air movement and mechanized or aerial tactical maneuver must become commonplace in the thinking of Infantrymen, and indeed of the entire Army. There should be nothing difficult or unusual about deploying Army forces strong in Infantry to any point on the globe by air in order to intervene decisively in an area of strife. In fact, it is the capability to intervene rapidly and positively with appropriate forces and weapons in a dangerous situation which can deter a limited war or preclude its assuming general war proportions. Tactically, the greatly increased battlefield mobility which the Infantry can gain through mechanization and aerial vehicles will provide the means essential to success and survival against numerically superior enemies on the future battlefield.

These considerations of the mobility essential to the Infantry resolve themselves into four distinct but related components: the mobility of the individual; the mobility of the vehicles in which he is transported into combat; the mobility of the organization containing man and vehicle; and finally the over-all mobility of those major elements of the Army which must be responsive to the needs of strategic and tactical operations.

From the foregoing considerations, I hope that *versatility* has been one of the watchwords of this conference. Moreover, in considering how greater versatility for the Infantry is to be achieved, I trust you have applied yourselves to the problem of overcoming obstacles to its attainment and of discarding methods and procedures which are no longer useful. We cannot hesitate to reject concepts which

may have been valid in the past but which are no longer suitable for modern Infantry combat.

In addition to those keys to success in battle which I have described, there is always the intangible quality of leadership which transcends all material considerations, notwithstanding the advances in equipment or tactics. The recognition of the primacy of leadership has a two-fold aspect. First, the successful implementation of the Army's concepts is as much a condition of mobility of mind and versatility of imagination of commanders and staffs as it is of the weapons. Therefore, cultivation of these qualities in our leadership training is a task of overriding importance; without these attributes of mind all else will be sterile effort. Second, there is the necessity for meeting the greatly increased demands for character, responsibility and initiative which the future battlefield will impose on Army leaders of all echelons. We look to The Infantry Center and to you who lead the Infantry to set the pace in the development of these vital leadership qualities.

In touching upon the roles of the Army and the functions of the Infantry, I have not meant to depreciate in any degree the valuable and indispensable support of the other combat arms and the technical and administrative services in performing the many duties which devolve upon the Army. Rather it would seem to me that, while I have stressed the importance of the Infantry's role as is appropriate before this Conference, we may see in the future an even closer amalgamation of the arms and services than ever before. We should properly maintain a competitive spirit within the elements of the Army in order to stimulate progress through new ideas and concepts. These latter must then be objectively evaluated in the cold light of their military worth and battle effectiveness, irrespective of branch partisanship or tradition. Whatever changes they may suggest, it is clear that our Army in any future type of war will derive its versatility and staying power from the Infantry, its shock action and protected tactical mobility from Armor and its supporting heavy firepower from the Artillery. It is you gentlemen who have the privilege and heavy responsibility of welding these elements together through effective leadership, and of forging a powerful weapon from our modern Army with which to meet the military challenge confronting us.

The ultimate product should be a stronger, integrated Army team, serving within our larger tri-Service force, dedicated as ever to the preservation of peace and the attainment of our national objectives.

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TRAINFIRE II

By Maj Edward J. Collins

This new marksmanship training program for the rifle squad has been troop-tested. The Infantry School has recommended that it be adopted.

BEFORE the Infantryman can become an effective member of the rifle squad, he must be a marksman capable of detecting and hitting combat targets. Trainfire I, which has already been adopted, gives the basic trainee this essential instruction.[1]

As a squad member, the rifleman must be taught *when, where* and *how* to fire and to move under battlefield conditions. This is the job of Trainfire II, the projected squad training program developed by the United States Army Infantry Human Research Unit at Fort Benning, in conjunction with the United States Army Infantry School. Based on the results of extensive troop testing, the Infantry School has recommended the adoption of Trainfire II as the standard program for squad combat training.

As the first step toward a revised squad training program, the Human Research Unit conducted several years of basic research into the deficiencies of our present program. Among the conclusions of the study was this important one—that teamwork inadequacies of American Infantrymen during World War II and the Korean Conflict were not primarily caused by fear. Instead, when they were under the stress of fear or apprehension, riflemen usually *did*

[1]See "Trainfire" in the January 1956 *Infantry School Quarterly*, pp. 47-54; "More About Trainfire I" in the April 1957 *Infantry*, pp. 34-44; "Trainfire Adopted" in the July 1957 *Infantry*, p. 89; and "Army Rifle Marksmanship Today" in the July-September *Infantry*, pp. 6-14.

MAJ EDWARD J. COLLINS, a member of the Technique of Rifle Fire Committee in the Infantry School's Weapons Department, was commissioned in 1942 after completing OCS at Fort Benning. In the following year he went to Europe where he served as a platoon leader and later as a company commander with the 320th Infantry Regiment, 35th Infantry Division. He left the service after the war but reenlisted in 1948 and in the same year was recalled to active duty as a commissioned officer. He then went to Germany as a company commander with the 18th Infantry Regiment, 1st Infantry Division. He was graduated from the Advanced Course at the Infantry School in 1954 and then served with the 24th Infantry Division prior to beginning his current assignment.

not know how to participate in effective squad action.

The explanation is twofold. First, the loose and unrelated ends of the rifleman's training had never been tied up into a compact, integrated pattern. Second, the individual had not received enough drill in squad action to make his battlefield reactions automatic and instinctive. Both these factors are, of course, interrelated.

Trainfire II, therefore, gives the rifleman integrated training in the technique of rifle fire *and* squad tactics. At present, under ATP 21–114 these two subjects are presented separately, and the result is "loose ends." In Trainfire II, training in related subjects is stressed. Besides giving the firer a complete pattern of battlefield procedure, this method allows instructors to work with smaller groups, to conserve training time and to make better use of training facilities.

Technique of rifle fire, in its present form, teaches methods which apply, in general, to any tactical situation. However, research has shown that techniques employed by the squad in effectively applying fire change, depending on whether the squad is attacking or defending. Thus separate techniques must be taught specifically for the attack and specifically for the defense. This is another deficiency remedied by Trainfire II.

Moreover, Trainfire II is more of a *how to do* than a *what to do* program. Great emphasis is placed upon drill and practical experience. The object is to produce a rifleman who, under stress of fear, fatigue, hardship and battlefield confusion will react automatically and, when necessary, without specific directions from the squad leader. This is to ensure that, whatever the conditions, the Infantryman will contribute his full share to squad fire and maneuver.

Once the squad begins operating as a casual assemblage of individuals, its efficiency is reduced, even if all members are firing. Real impact upon the enemy comes from collective fire and movement undertaken according to plan and technique. Consequently,

The trainee squad, formed as skirmishers, crosses the line of departure . . .

. . . advances by fire and maneuver, one man covering another's movement . . .

much of Trainfire II instruction is based on SOPs and standardized techniques, some of which are already being used. Using these SOPs, the proper response to any combat situation becomes second nature to the Infantryman. The SOPs allow the squad leader better and more effective control over his men. They reduce the amount of additional combat training necessary for replacements and they decrease verbal instruction, thus providing more training time for practical work.

All of these elements add up to realism, and that is one of the primary objectives of Trainfire II. Each trainee fires a total of 256 live rounds on a variety of Trainfire II ranges. Full use is made of realistic targets at combat ranges. Several newly developed simulators recreate enemy firing and actions in combat. Every effort is made to give the rifleman the next best thing to actual battle experience.

Trainfire II ranges and procedures were intensively troop-tested and additional tests continue. During troop tests, the performance of conventionally trained soldiers and soldiers trained under Trainfire II was compared and evaluated. The two groups were sent through proficiency ranges designed for this purpose and the conduct of each was carefully observed. Where necessary, modifications were made in the original Trainfire II program.

Fort Carson, Colorado, and Fort Jackson, South Carolina, were given the mission of conducting the troop tests. As a preliminary step, selected personnel were sent to the Trainfire II Instructor Orientation Course at Fort Benning in September 1957.

Based on a Trainfire II "Instructor's Guide," prepared by the Weapons Department of the United States Army Infantry School, and utilizing the instructors trained at Benning, Fort Carson conducted its original tests from late November 1957 to the end of March 1958. USCONARC subsequently approved Fort Carson's request to further test a revised Trainfire II program which incorporated recommended changes. The additional tests were conducted in June and July 1958, and most of the changes proved acceptable. Pending approval of Trainfire II by the Department of the Army, Fort Carson has received permission to utilize the Trainfire II program in instructing all basic trainees.

Troop tests at Fort Jackson began in September 1958 and are scheduled for completion by the end of February 1959. Evaluation of the results can be expected late this spring. It is expected that a finalized Train-

. . . or two men covered by the other members of their fire team . . .

. . . and assaults the objective, firing from the shoulder or underarm position.

fire II will become the standard squad combat training program throughout the Army sometime late this year.

The detailed lesson plans contained in the "Instructor's Guide" are a significant feature of the Trainfire II experimental program. The lesson plans standardize material presented to trainees, and simplify class preparation and conduct. Not in any sense "canned," the lesson plans provide lines of development and explanation for the individual instructors to follow. Basic material is presented in narrative form to insure that every class will receive the same clear, logical presentation. This is necessary because much of the value of Trainfire II is derived from the logical sequence in which subjects are taught, and from a full use of concurrent or integrated training.

The 32 hours required by ATP 21–114 are replaced by 30 hours of Trainfire II. The distribution of hours is detailed in Figure 1. Individual tactics, cover and concealment, camouflage and other subjects related to the movement of the soldier on the battlefield are presented concurrently.

Trainfire II ranges reproduce the basic problems the squad will encounter in combat and are designed to develop each trainee's ability to function as a part of a fire unit in the engagement of combat-type targets in the attack and in the defense. For this purpose several ranges and courses are employed, including a Technique of Rifle Fire Range (periods 2 and 3), a Defense Training Range and a Technique of Assault Range (period 4) and an Attack Training Range (period 5).

The electrically powered pop-up target M31 is the principal device used on Trainfire II ranges. The M31 simulates a human figure that suddenly appears, remains exposed in the same position, then disappears. The M31 remains in the visible position until struck by a bullet or released by the operator. The advantage of this pop-up device is that it presents a "killable" target which automatically falls when hit. It also provides an on-the-spot measure of the soldier's accuracy.

In addition, camouflaged plywood panels are used to record hits and distribution of fire. The panels are placed, either individually or in banks, behind pop-up and linear targets. Scores are registered electrically upon a mechanical counter.

The realism of Trainfire II ranges is increased by the use of various types of simulators. An electromechanical small-arms simulator, 3–C-65, is employed to create a background of single shot and automatic enemy fire (Figure 2). Panel-mounted and operated by remote control, it produces smoke, flash and sound. The device is used to give battlefield clues to target locations, and to mark the extremities of linear targets.

Quarter-pound blocks of TNT, or

Figure 1. Training Program.

TRAINING PROGRAM

Period	Subject	Hours
1	Orientation, Formations and Means of Control	2
2	Tactical Training for Squad in the Defense; Technique of Rifle Fire, Part I	4
3	Tactical Training for Squad in the Attack; Technique of Rifle Fire, Part II	4
4	Live Firing Exercise for Squad in the Defense; Tactical Training for Squad in Reorganization and Consolidation of the Objective; Technique of Assault Fire	8
5	Live Firing Exercise for Squad in the Attack; Tactical Training for Squad in Semi-Independent Action	8
6	Blank Firing Exercise for Squad in Semi-Independent Action	4
	Total	30

standard 105mm simulators, are used to reproduce artillery blasts. In addition, a specific artillery simulator, which works on the principle of 3–C–65, has been developed (Figure 3). It is safer than explosives, and can be used to the rear of as well as forward of the squads.

Such devices provide a large amount of the "feel" of the battlefield. Moreover, the realism of Trainfire II ranges is increased by a systematic use of this equipment. The M31 device, for instance, provides a most effective target clue when the silhouette is replaced by a bush or branch to simulate a moving but hidden enemy. On the Defense Training Range, a logical sequence of enemy attack is represented by the interrelated use of many targets, target clues, simulators and other devices.

The value of Trainfire II principles and techniques was clearly demonstrated by the troop tests thus far completed. Since trainees ordinarily have not received automatic rifle training by their seventh week, when Trainfire II is presented, automatic rifles are not used in the Fort Jackson and Fort Carson trainee squads. The initial test squads consisted of eight trainees armed with the rifle, a cadre squad leader and two cadre team leaders.

When Autofire[2] is integrated into the basic training program, trainee automatic riflemen will fire the automatic rifle during Trainfire II. The two automatic rifle positions in each squad will be rotated among all trainees. An adaptation of Trainfire II has been recommended for TOE squads and for 11-man trainee squads utilizing trainee squad leaders, trainee team leaders and trainee automatic riflemen. Eventually, members of the rifle squad will be armed with the M14 and M15 rifles, but these new weapons will have no effect upon Trainfire II techniques and procedures.

The aims of Trainfire II remain essentially the same as the present program. But the means employed are radically different and much more effective. Trainfire II teaches the individual squad member *when, where* and *how* to shoot when his squad is *attacking* and when his squad is *defending*. It teaches this as an integrated, squad combat training program which stresses *doing*. It produces a rifleman who reacts with confidence under fire, and who is equipped to contribute his full share to squad fire and maneuver.

Trainfire II does not diminish the need for effective leadership and the will to win. It does, however, provide a firm foundation which makes the individual soldier more responsive when leadership is called for, and more self-reliant in situations demanding self-reliance.

[2]See "Autofire," p. 42.

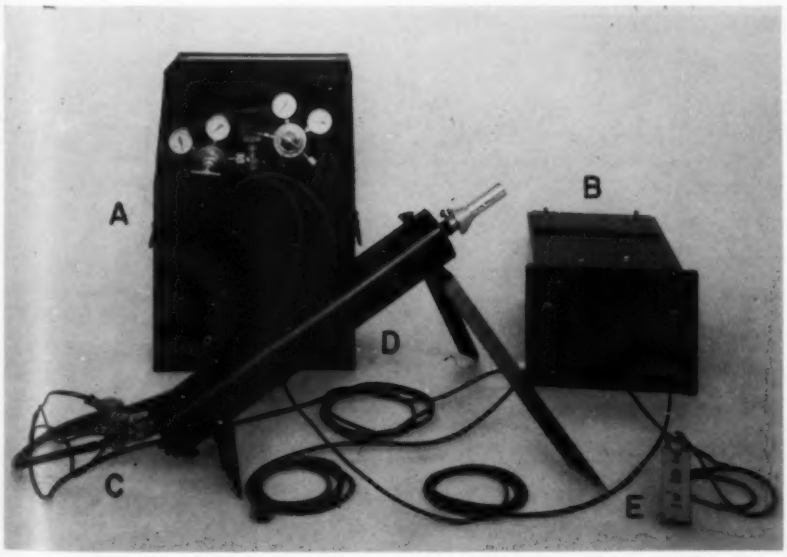

Figure 2. The Gunfire Simulator reproduces the noise, smoke and flash of small arms. Adjustable for either a single-shot or automatic effect, the simulator realistically "fires" 21,000 rounds without "reloading" — enough for a full day's training. The device, which more than pays for itself through savings in blank ammunition, has many applications in maneuvers and field exercises. The complete simulator shown above includes: A — fuel supply of oxygen and acetylene; B — motor; C — ignition system; D — gun; E — trigger.

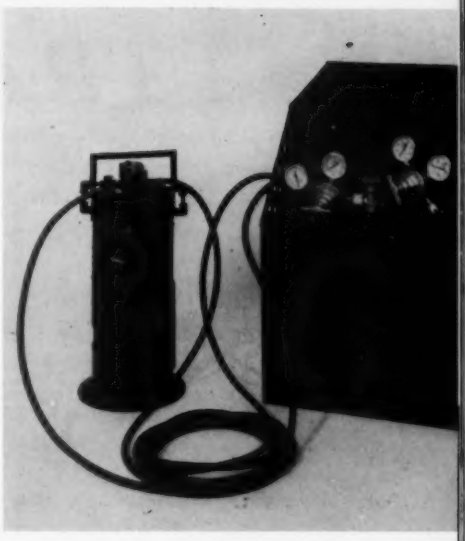

Figure 3. The Artillery Simulator operates on the same principle as the Gunfire Simulator. Considerably safer than an explosives-type device, it produces realistic sound, smoke and flash. It can be used to the rear of as well as forward of troops. The simulator motor is not shown in the illustration.

In the next issue of INFANTRY, *Major Collins will present another article on Trainfire II. He will discuss in some detail Trainfire II courses of instruction, lesson plans, training techniques and ranges.— Editor.*

TRACKS FOR THE INFANTRY

This is a continuation of the series of articles on the adaptability of the M56 as a light, mobile, immediately available platform for Infantry weapons.

THE M56 has the kind of mobility the Infantry needs and wants. This vehicle is reminiscent of the jeep, which introduced a new kind of wheeled mobility during World War II. Starting off as a small, rugged, ¼-ton truck, unlike anything the Army ever had before, the jeep soon became an indispensable workhorse. Uses not contemplated when it was developed were soon found for it. The jeep became a command vehicle, an ambulance, a weapons carrier and even a weapons platform.

An M56-type vehicle could have a comparable future as a tracked workhorse for today's Army. Like the fabulous jeep, it is small, light, rugged and versatile. Developed as the carriage for an air-transportable 90mm self-propelled antitank gun, it has demonstrated remarkable capabilities. The Infantry sees in this vehicle an immediately available platform for Infantry weapons and for other uses which will provide the mobility needed by the Infantry right now. In "Tracks for the Infantry" in the last issue, *Infantry* began a series of articles on the M56. Part I, "The Scorpion," discussed the characteristics, capabilities and tactical employment of the M56 self-propelled antitank gun. Part II, "Short Cut to Mobility," showed how, with very minor modifications, this standardized and available vehicle will provide the Infantry with a full-tracked platform for such weapons as the 106mm recoilless rifle, the 4.2-inch and 81mm mortars and the quad .50 multiple machinegun. Discussion of the M56 is continued in this issue, in Part III, "Mortar Mobility."

Part III. Mortar Mobility

By Maj Frederick M. McConnell

THE last issue of *Infantry* magazine, in a two-part article, "Tracks for the Infantry," discussed the adaptability of the M56 "Scorpion" as a multi-purpose carrier to increase Infantry mobility. In Part II of that article, "Short Cut to Mobility," Maj Albert L. Kotzebue pointed out briefly that the M56 would provide a versatile platform for the 4.2-inch mortar. The same issue carried an article by Maj Hulen D. Stogner, "The Battle Group Commander's Personal Artillery," which discussed the organization and employment of the 4.2-inch mortar as an Artillery unit in the battle group.

These two articles pave the way for a closer look at the M56 as a mortar platform, and for a reappraisal of the organization of the 4.2-inch mortar battery in the light of this marriage of an indirect-fire weapon with a tracked vehicle.

The characteristics of the M56 have already been covered. Without going into specifics, we know that it is a remarkably fast, light, rugged and maneuverable vehicle. We know that no more maintenance is needed on the M56 than on the ¼-ton truck. We have seen that the M56 track system is unique, trouble-free and dependable. Of course no one needs to reiterate that tracks provide better battlefield mobility than wheels.

We also know that the M56 can take the recoil of the 4.2. And we have found that sight deviation after the firing of each round is no greater than when the mortar is fired from the ground.

If the M56 has these capabilities, and if the marriage of this carrier with the 4.2-inch mortar has been proved feasible, then it seems to me that the Infantry now has the possibility of a significant advance in the effectiveness of its supporting firepower.

There is one very obvious—and very important—advantage to mounting the 4.2 on the M56 carrier. It stems from the fact that the effectiveness of firepower generally increases in direct proportion to its mobility. The necessity for dispersion and rapid concentration on the nuclear battlefield is mentioned so often these days that we tend to skip over its importance. Yet practical mobility is vital in modern combat and when such mobility is allied to the potent 4.2-inch mortar, the result is an extremely efficient weapon.

At the present time, the 4.2-inch mortar depends upon the ¾-ton truck and trailer for its mobility, and it is a rather limited mobility at that. When carrying the 4.2 and crew, the truck is overloaded by 1700 pounds and can move the mortar only to

Side view of the 4.2-inch mortar mounted on the M56 carriage. Note ammunition stowage boxes and seats for crew.

positions which are accessible by road or over ideal terrain. At times, the wheeled mobility of the ¾-ton truck will not permit the mortar to be delivered on carrier to the desired point of emplacement. In such cases, the mortar must be manhandled over considerable distances and, of course, the ammunition must also be hand-carried to the position.

The M56-mounted mortar, however, has no such limitations. It can go just about anywhere the Infantry soldier goes. It can climb slopes, surmount obstacles, span ditches and ford streams. With a low track pressure of 3.5 pounds per square inch it can do this through snow, mud, sand or dense vegetation. It can provide fire support for the Infantryman where he needs it and when he needs it.

This unusual mortar mobility has other advantages. For instance, it could lessen the dangers of close-up employment. The mortar unit could go rapidly out of action, move to a new position and quickly re-engage the enemy. No difficult and time-consuming withdrawal from a prepared position, no loading and unloading, no preparation of a second emplacement. The M56-mounted 4.2 can literally "shoot and scoot."

This capability is particularly important now that radar equipment will enable the enemy to place counterfire on our mortar positions within a few minutes. After firing, the M56-mounted 4.2 can actually move off while the rounds it has fired are still on the way.

The superiority of the M56 system in this respect was demonstrated by a simple test by the Weapons Department of the Infantry School. Two mortar squads started simultaneously from the same point and moved to separate firing positions thirty yards away. A five-man crew serviced the carrier-mounted mortar; the other mortar, on the ¾-ton truck, required a seven-man crew. The mission was to engage a target from these initial positions and then place fire on a second target from alternate positions. The first target was at a range of 1700 yards, the second at 1400 yards. The truck-borne squad unloaded their mortar and assembled it on a previously prepared position. They fired two "settling" rounds, then one round for adjustment and five rounds for effect. But by the time this squad's first round for effect had landed on target one, the smaller M56 squad not only had fired an identical mission (less the "settling" rounds), but it had completed the second mission —had moved 65 yards to the alternate position, fired one adjustment round on target two and had five rounds "on the way." This test was repeated six times with essentially the same results. There is no question that the M56-mounted 4.2 mortar far outclasses the truck-borne 4.2 in movement capabilities.

As a matter of fact, so great is the maneuverability of the M56-mounted mortar that it is as if a "ghost" mortar platoon had been added to the battle group commander's arsenal. That is, the carrier-

mounted 4.2 can provide wider coverage, or more intensive coverage of a limited area. This capability assumes great importance on the nuclear battlefield. The dual requirements of increased frontages and periodic concentration of conventional fires seem ideally answered by the M56–4.2 mortar combination.

There are still other advantages. As indicated earlier, the carrier-mounted 4.2 requires no "settling" and its emplacement travels with it. This particular advantage represents a considerable saving of ammunition and of time. Yet the tracked 4.2 can avail itself of all the benefits of emplacement—camouflage, concealment, defilade—with none of the drawbacks.

It has been pointed out that the M56-mounted 4.2 is serviced by two fewer men than the 4.2 carried by the ¾-ton truck. In addition, the M56 can carry a total of 90 rounds, as opposed to the 74 rounds which now comprise the basic load of the ¾-ton truck and trailer. And because there is no necessity of "settling," every round counts.

The M56-mounted 4.2 retains the capability of being air transported. It is light enough to be airlifted in several of our current cargo aircraft and, with a modified baseplate, could be lifted short distances by the H37 helicopter. These capabilities permit the tracked 4.2 to be employed with an extra measure of speed and surprise.

Another capability of the M56-mounted 4.2 is particularly useful on the nuclear battlefield. While the best protection undoubtedly would be achieved by digging in the dismounted mortar, this takes time. The tracks of the M56 provide a speedy means of using ground for protection. The digging can be accomplished by using explosives to blow a crater large enough to accommodate the M56. The vehicle can then trundle into the hole in a few seconds and move out again just as quickly. Of course, if time permits, the hole could be improved for better protection. The tracked platform will suggest a host of similar expedients to the imaginative commander.

The 4.2 mortar mounted on an Infantry carrier can clearly deliver more accurate, more responsive and more decisive supporting fires. In highly successful testing at Fort Benning over a period of nine months, the M56-mounted 4.2 fired a total of some 700 HE rounds, at rapid rate and from minimum to maximum ranges. The performance exceeded that of the ground-mounted 4.2.

In reality, the marriage of the mortar to the M56 produces a new weapon which can give the battle group commander a more effective Sunday punch. Employed in this manner the carrier-mounted 4.2 should be an Infantry weapon.

This proposal is not an attempt to usurp a function of the Artillery. It is made to utilize most effectively the special responsiveness of the M56–4.2 mortar combination to Infantry requirements. Furthermore, the Artillery has indicated that the 4.2, even as it is now employed, is unsatisfactory as an Artillery direct support weapon. It seems logical that the present mortar battery should return to Infantry organization as a mortar company. In this case, the 4.2 mortars would become—fully and literally—the battle group commander's personal artillery, completely responsive to their role in the total Infantry job.

Integration of the 4.2 into the Infantry team would have several important effects. To begin with, Artillery and mortar fires would be placed in better perspective. This would benefit everyone. The Artillery could devote its attention to matters involving artillery support. And the Infantry would be able to tie together all of its mortar support. This is particularly desirable since the improved 81mm HE round so closely approaches (2450 yards) the close support range of the 4.2. Furthermore, both the 81mm and 4.2-inch mortars now have the same sight (M-34A2) and, under Infantry control, the fires of the 4.2 would undoubtedly be directed by the same fire control instrument, the M16 plotting board.

Certain changes in the present battery organization and equipment would permit the Infantry mortar company to make maximum use of the M56-mounted 4.2. The introduction of longer range radios on Infantry channels would permit adjustment of mortar fires by the Infantryman. Moreover, this use of Infantry frequencies would allow the establishment of a common mortar fire direction system within the battle group. Thus the fires of the 81mm and 4.2-inch mortars could be massed when necessary.

Also, the ability to shift trained crewmen laterally, without a change in branch, is a desirable advantage. And training of mortar personnel would be greatly simplified due to the use of somewhat less complex

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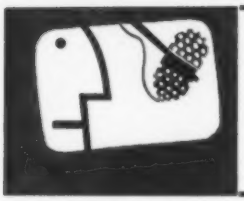
MAJ FREDERICK M. MCCONNELL is the executive officer of the Mortar Committee in the Infantry School's Weapons Department. He received an Infantry commission in the Organized Reserve Corps at Fort Moultrie in 1938. During World War II he served with the 260th Infantry Regiment at Camp Shelby and with the 334th Infantry Regiment, 84th Infantry Division in Europe. After the war, he attended Clemson College, from which he was graduated in 1950. He then became an instructor in Military Science and Tactics and Chief of the Infantry Section at Georgia Institute of Technology. In 1952 he went to Korea where he commanded both a rifle company and a heavy weapons company with the 9th Infantry Regiment, 2d Infantry Division. Major McConnell began his assignment at the Infantry School after completing the Infantry Officer Advanced Cource in 1954.



QUARTERLY QUIZ

Answer the following questions to determine whether you are a bolo, recruit, marksman, sharpshooter or expert. Each question is worth 10 points.

1. A linear formation (three or more rifle companies in the attacking echelon) is favored for the dismounted battle group when:
   a. terrain provides excellent cover and concealment.
   b. there is an adequate road net.
   c. multiple approaches are available and objectives are shallow.
   d. strong flank security is required.
2. In an attack in which the platoons of a rifle company are mechanized with Infantry carriers, is an assault line selected?
3. What vehicles are available within the assault gun platoon of Hq & Hq Co, Infantry division battle group, for ammunition resupply from the battle group supply point when the platoon is operating as a unit? How are they used?
4. The general location, control and composition of the combat outpost line are usually prescribed by the:
   a. forward rifle platoon leader.
   b. weapons platoon leader of the forward rifle company.
   c. battle group commander.
   d. forward rifle company commander.
5. In a night attack, the probable line of deployment is the location on the ground where:
   a. the company commander plans to complete final deployment prior to moving out with squads as skirmishers.
   b. movement is facilitated into and out of the attack position at night.
   c. attacking troops do not pass without battle group authority.
   d. weapons are registered to deliver fires on call, if necessary.
6. You are the leader of a night combat patrol. After receiving the commander's briefing, what preparations and planning will you accomplish before the time of departure?
7. During defensive operations, the battle group relies upon wire as one of its primary means of communication. As a minimum, the battlegroup communication platoon installs:
   a. one line to all attached and subordinate units.
   b. two lines to all attached and subordinate units.
   c. two lines to frontline units and one to reserve and supporting units.
   d. two lines to all rifle companies and one line to the mortar battery.
8. If no battery supply is available or if the transmitter element is defective in the Telephone Set TA-312/PT, emergency operation is possible over reduced distances by:
   a. shouting into the transmitter.
   b. holding the press-to-talk switch down for several seconds.
   c. using the transmitter element as a sound-powered transmitter.
   d. using the receiver element as a sound-powered transmitter.
9. You are detailed to conduct a special flame warfare school to qualify gunners for the portable flamethrower. The division G3 informs you that the fuel available will permit only one "shot" per man. This is inadequate to conduct aiming and firing exercises. What can you do to ensure realistic "shooting"?
10. What are the four major differences between the new M14 and M15 rifles?

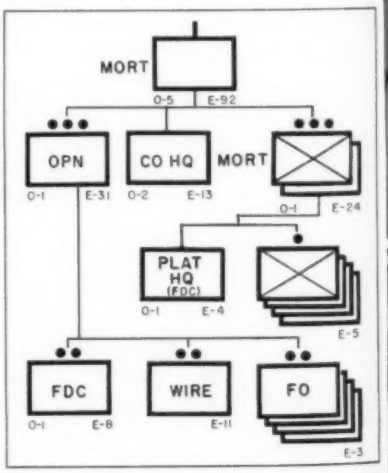
For answers turn to page 72

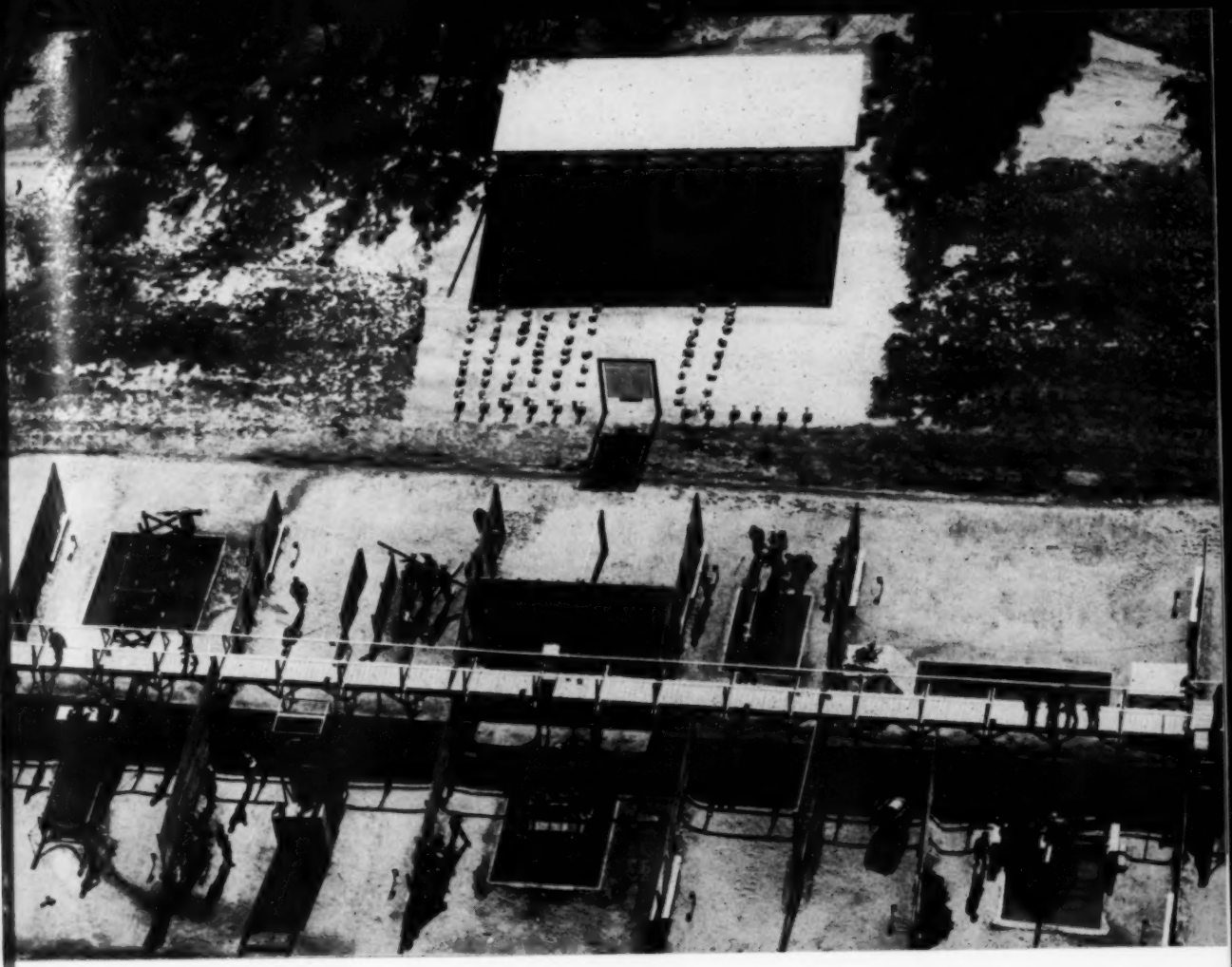
methods of fire control and the possibility of providing instruction strictly in the relevant Infantry aspects of mortar support.

An organization chart for an Infantry mortar company, utilizing the same eight tubes now assigned to the mortar battery, but mounted on the M56 carrier, is shown in Figure 1. The company contains five officers and 92 enlisted men, organized into an operations platoon and two firing platoons, each with an organic fire direction center and four mounted mortar squads. The squads contain five men each. The Survey Section, and the fire support coordination and air control functions, would be returned to the Artillery. The Infantry mortar company would require six fewer officers and 42 fewer enlisted men. These officers and men could be made available to the Artillery.

The M56–4.2 combines firepower with mobility. It permits the close and continuous organic fire support which regimental commanders dreamed of just a few years ago. An Infantry mortar squad, mounted on an Infantry carrier, can apply flexible, mobile, hard-hitting firepower when and where the Infantry most needs it. This combination is really a new weapon—one that is more remarkable than the M56 and more effective than the 4.2.

Figure 1. Proposed Infantry mortar company.





Leadership Training Come to Life

By Maj Van T. Barfoot

Here is a realistic Leaders Reaction Course which provides a practical approach to our leadership training. This course teaches as it measures leadership strengths and weaknesses.

THE eight-foot wall of a prisoner-of-war compound rose abruptly from the far edge of a water-filled moat. Across the top of the wall ran a bare cable heavily charged with electricity. Coils of concertina wire blocked all other exits from the enclosure. In a shadowy corner near the moat, six soldiers huddled together talking in whispers. Working rapidly and quietly, one of the soldiers knotted a length of rope to the top rung of a short, makeshift ladder and tested it with a hard tug.

The man who appeared to be the leader of the group listened intently for a moment, then gave a silent signal. Quickly, efficiently, two of

Water obstacles provide a "dampening," but harmless, penalty for misjudgment.

the men carried the ladder the short distance to the moat and stood it upright, at the same time bracing it with their boots. It was obvious that the ladder was too short to span the moat but this did not deter these men. Three other men of the group moved from the shadows and grasped the free end of the rope which hung from the upper end of the ladder. They dug their heels into the sandy ground. As the remaining man moved from the shadows and began to climb, they slacked off the rope and the ladder angled out over the water.

Cautiously, glancing first at the water and then back at his comrades, the soldier climbed. In a moment he was perched on the top rung. The other men strained to hold the ladder steady while he carefully stretched across the open space to reach the top of the wall. He found a handhold dangerously near the highly charged wire, but without wavering for a moment he shifted his weight to that hand and then located a hold for the other. With athletic agility he vaulted and pulled himself to a position atop the wall. On the other side he found a piece of pipe. Cautiously moving this over the wire he was able to help the rest of his comrades, and the entire group was soon across the moat and assembled on the other side of the wall.

This team of young soldiers had successfully solved one of the realistic situations of the Leaders Reaction Course at the United States Army Infantry School. Like the other tasks in the course, this problem demanded the kind of thinking and teamwork that is required of young leaders in combat. The course is really a laboratory for testing the principles of leadership which students at the Infantry School learn in the classroom.

In similar cubicles of the compactly designed problem area other teams were facing comparable situations. Spirit was at a high level. Every man was putting forth his best effort to help his team succeed. It is apparent to anyone who observes this training that here is an excellent vehicle for impressing students with the importance of teamwork. But this is only one facet of the course. It merely scratches the surface of the total value of the Leaders Reaction Course.

To understand the purpose and true value of this unique teaching aid, it is necessary first to understand the thinking behind leadership training at the Infantry School. The School considers leadership to be an art which can be learned and developed. It rejects the theory that leadership ability is entirely a matter of heredity —that all leaders are born. It believes that good leadership is founded upon certain personal qualities and upon ability to understand and apply leadership principles and techniques.

Of the many personal attributes necessary in a good leader, three form the basic foundation for all others: character, intelligence and alertness. This of course does not mean that all people who possess these qualities are leaders, but any individual who aspires to be a leader must possess them to a reasonable degree. Other qualities must be present or must be developed. Among these are such things as decisiveness, endurance and military bearing. The School believes that these can be developed by the individual who has a sincere desire to lead men. By study and application of the techniques of leadership, the individual who has the basic attributes, plus the desire and the willingness to work at it, can become the kind of person who commands the respect, confidence, loyal cooperation and willing obedience of other men.

Application of the techniques is especially important. Practical experience is needed which will reveal flaws in the individual's approach to leadership problems. Too often in

the past young leaders who have studied the principles and felt they knew the techniques have failed to recognize serious weaknesses in their leadership ability until failure has brought their shortcomings into sharp focus.

Such failure can be costly—not only to the leader but to those he leads. Once lost, confidence and respect are difficult, frequently impossible, to regain. But more important, lives lost through leadership errors can never be restored. One of the purposes of the Leaders Reaction Course is to help the individual recognize his weaknesses so that he may overcome them. The course has proved to be so effective that all officer candidate, basic Infantry officer and senior noncommissioned officer classes at the School go through it as a part of their leadership training.

The problem area for the course is a compact structure which consists of 12 walled-off compartments, each containing all of the necessary items for the situation to be solved. Nine of the enclosures contain a shallow, water-filled moat. The moat constitutes an obstacle which must be negotiated and provides a "dampening," but harmless, penalty for misjudgment. The remaining compartments provide other types of obstacles.

MAJ VAN T. BARFOOT, who wears the Medal of Honor, is an instructor with the Leadership Committee of the Infantry School's Special Subjects Department. He enlisted in the Army in 1940, and later participated in the amphibious landings on Sicily, and at Salerno and Anzio. In 1944, while in Italy, he received a battlefield commission and served as a platoon leader and company executive officer before assuming command of a company of the 349th Infantry Regiment, 88th Infantry Division. Major Barfoot returned to the United States in 1945 and joined the 5th Infantry Division at Fort Jackson. While he was with this organization, he commanded a company of the 10th Infantry Regiment and later held the post of regimental adjutant. He then went to Germany for an assignment with the 1st Infantry Division. There he was assistant S3 of the 18th Infantry Regiment, commander of a heavy mortar company and finally, commanding officer of division headquarters and headquarters company. His next assignment was that of advisor of the 116th Infantry Regiment, Virginia National Guard. He left that post in 1954 to become the assistant G3, U.S. Army, Alaska. Three years later he received his current assignment at USAIS.

Strength, dexterity and a good plan are needed to manipulate the drum over this obstacle.

The arrangement of the structure permits maximum control by instructor personnel and reduces movement time between tasks.

The concept of the Leaders Recreation Course and the objectives sought are not new. Actually the same type of course has been used for some time by the United States Air Force at Maxwell Air Force Base and by the British, who utilize it to determine the leadership potential of candidates for Sandhurst and the Royal Air Force Academy. The British Intelligence Service also has used a situation-type course to train and test agents for employment behind enemy lines. The former German Army evaluated its officer candidates using much the same method.

Taking the basic ideas developed by these agencies and adapting them to fit Infantry requirements and situations, the Infantry School introduced its own reaction course in 1954. The course has three objectives: to measure the degree to which leadership traits are possessed by the individual; to provide the junior leader with a means of making a self-evaluation of his leadership ability and potential; and to give the participant an opportunity to apply lessons learned in formal leadership instruction.

The course is divided into two

Should the soldier lack the physical agility or strength necessary in a combat leader, this task will bring it out.

phases: the application phase, which is conducted out-of-doors in the problem area, and a subsequent counseling phase for each individual which is given in privacy indoors.

The class receiving instruction is organized into 12-man groups at the outdoor site and each group is assigned to an experienced officer who acts as a rater. After a brief orientation, during which the importance of not divulging problem situations to subsequent classes is stressed, the groups are taken to their first situation area. There the rating officer divides the 12-man group into two teams. These teams alternate between working problems and observing. Each man dons a numbered helmet and the members of the observing team take seats on the bench provided in each cubicle. At the order, "Commence work," given to all groups simultaneously by the principal instructor, the rater reads the special situation and explains the task requirement.

In a typical situation the members of the team might be told that they are bringing ammunition forward to their unit in a cart. Enroute they come to a blown-out bridge over an unfordable river which separates them from their unit. The problem is to cross the river (represented by the moat) with the cart and ammunition. The only materials available at the site are a few planks, some steel pipe and a rope. For the next 15 minutes the students are on their own. If this is their first situation, they work without a designated leader. This is done to give the rater an opportunity to look for leadership ability in members of the team. Frequently, a student will emerge from the team to take charge, and the task will proceed under his direction. At times a team will work as a committee with no one really in charge. And, of course, there is also the case where no one leads and no one cooperates, a situation which results in confusion. In subsequent problems, however, a leader is appointed.

At the end of the 15-minute period the principal instructor orders, "Cease work." The team stops and replaces all materials. A five-minute critique is then given either by the rater or by a designated member of the observing team. The group then moves to the next situation where the observing team becomes the working team. In this manner the group works and observes its way through the 12 tasks. If the rater desires, he can rearrange the teams at any time during the course so that the same men do not work together throughout all tasks.

The rater is the key to the success of the course. Each task is designed to expose both the good and bad traits of all the participants. It is vital that the actions of the men be properly evaluated. Only a ma-

Moving a loaded cart over this obstacle requires leadership and teamwork.

ture, experienced officer can do this. He must decide to what degree each student possesses such leadership traits as decisiveness, judgment, enthusiasm, endurance, initiative and unselfishness. He attempts to rate each man in these traits every time the man performs, but this is not always possible. Therefore, he rates only those traits which he actually observes, and evaluates them as high, medium or low.

Experience gained during past operations of the course assists the rater. Also, the initial situation in which a leader is not appointed gives the rater an exploratory period during which he can categorize his students roughly as good, average or poor leaders. He can begin to look for character types, some of which are quite common and easy to pick out.

For instance, he can spot the man with ideas, who seems to do most of the talking. While this individual generally has an innate desire to lead, he is not necessarily a leader. In fact, his fellow students may already have eliminated him as such. The rater watches very closely for evidence of this. Such an individual may lack good judgment, and may put forth a number of ideas in rapid-fire order without being sure of any of them. The person with better judgment generally is not as talkative.

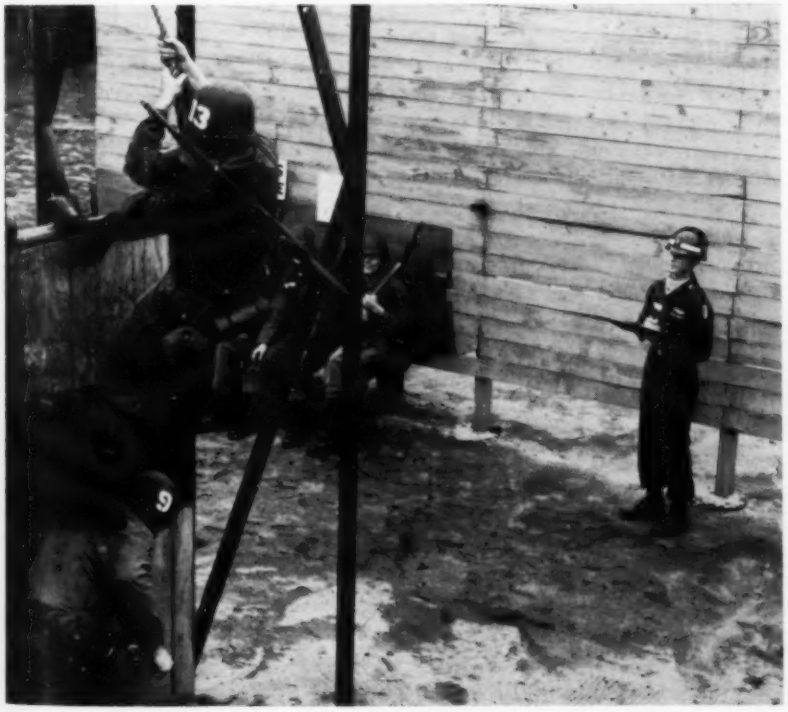
Then there is the person who is too positive. He usually is characterized by rigid thinking and a vigorous defense of his ideas, even though they may not be based on sound judgment. This type of person may feel that he possesses the natural right to be a leader.

Another type is the "spoiler." This man has few good ideas and resents others who have ideas of their own. Normally he is unenthusiastic and passes the course off as a joke. The rater gives special attention to this type.

Attention is given also to the student who tries with all his heart but appears to lack ability. This individual has one of the important ingredients of leadership—determination. With proper guidance he may be developed into an effective leader.

All of the tasks require ingenuity in the use of materials at hand. Note the forked sticks lashed to the stretcher.

Both the observing team and the rater watch the working team closely for evidence of leadership.



The man with little ability and no determination presents the most difficult problem. Unless he can be sufficiently motivated and developed, he will be of little use as a leader.

Occasionally two strong leaders turn up in the same team. When this happens, one frequently resents the other. Such resentment, of course, is a weakness and indicates a lack of ability to be a good follower. The good leader must be able and willing to follow as well as to lead. The rater may let the situation develop or he may shift one of the men to the other team.

Then there is the person who lacks tact. He is not confined to any one

type. He can have most of the potentials of a good leader or he may lack them. In the case of the potentially good leader this is indeed serious, for his tendency to offend people can seriously weaken his overall capability for leadership.

This listing of types is by no means exhaustive but it does include some of the personalities which emerge most frequently in the course. The rater is constantly alert to spot these and other types during the conduct of the problems.

During the critique period the rater actually conducts a brief class in leadership, using the task just completed for examples. He relates the lessons learned to problems which the student is likely to encounter later as a commander. In some instances the rater directs a member of the observing team to conduct the critique, particularly if he feels that this will provide a broader picture of the briefer's abilities. This procedure also allows the student to gain experience in evaluating the capabilities of others.

When the group has completed the application phase of the course the rater's other vital job begins. He consolidates his findings for each student on a single form and prepares a word picture of each man. After careful study of these findings the rater is ready for the counseling phase of the course. During this phase, in a private conference, he points out to the student his demonstrated strengths and weaknesses. The rater is frank but friendly in his relationship with the man and reflects a real desire to help him. The student is assured that the information gained during the course will not be used to his detriment but that it can work to his benefit. He is encouraged to relax and be honest with himself.

Frequently the rater finds it helpful to have the student talk about his own leadership attributes or lack of them before discussing the information gathered from his reaction on the course. This permits the student to acknowledge his weaknesses without the rater having to point them out. In some cases it eliminates embarrassment or the possibility of the rater's becoming too blunt. Regardless of how the rater conducts the interview, an air of mutual honesty, frankness and sincerity is necessary for successful counseling.

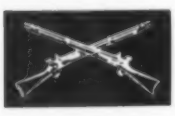
The length of the discussion varies, depending upon the student's problems, but whatever the length, the rater must accomplish two things. He must point out to the student his strengths and weaknesses, along with advice leading to self-improvement. And, most important, he must motivate the student to make maximum efforts in accomplishing that self-improvement.

The student profits from the Leaders Reaction Course in many ways. He learns to appreciate the full value of teamwork—he can see quite vividly how his own actions and those of his teammates either help or handicap the accomplishment of the team mission. He gets practical experience in evaluating the abilities of other men and learns how to size-up his associates. He is given the opportunity to evaluate his own abilities by observing the response of his teammates to his actions and orders —he determines to what degree he is able to get results from others. He sees more clearly the validity of the instruction he may have questioned in the classroom.

He actually leads others, but the mistakes he makes do not result in the serious penalties which may follow errors made in real command situations, particularly in combat. If he errs in judgment, wavers on a decision or fails in any other way, no serious harm is done and he learns how to avoid such errors when the chips are down. And finally, he gets the mature counseling of an officer who has a personal interest in his ability and accomplishments.

The Leaders Reaction Course is not only a sensitive barometer of individual capabilities, but it also teaches as it measures. The realism and the wide application of the situations it presents provide vital preparation for the young officer, detect his deficiencies and indicate means of self-improvement. The Leaders Reaction Course is leadership training "come to life."

The Leaders Reaction Course is one of the several steps taken by the United States Army Infantry School to develop the leadership ability of the junior Infantry leader. In a future issue, Infantry *will discuss TRAINLEAD, a series of leadership films. Each film is designed to capture the interest of the student to the extent that he will identify himself with the central figure and participate actively in subsequent classroom discussion. Distribution of the films began last October.—Editor.*



WHAT IS AN INFANTRY WEAPON?

An Infantry weapon is any individual or crew-served weapon, irrespective of size, weight, range, caliber, mobility or lethality, which is habitually employed by Infantrymen in mounted or dismounted operations.

PRO & CON

A NEW *INFANTRY* FEATURE

This column provides a forum for open discussion on both sides of controversial subjects. If you and your associates hold opposite views on a topic of interest to Infantrymen let us have your thinking. We want both viewpoints.

THE value of the sniper in Infantry units has been a matter of controversy for some time. Recently, the Infantry School has taken the position that the sniper is no longer needed. It is apparent, however, that many Infantrymen—even those who concede that the sniper is no longer needed in the rifle squad or even at platoon or company level—feel that there is still a requirement for the highly skilled precision marksman. In the interest of developing further thought and discussion on this subject we present the opposing views of two officers in the School's Weapons Department. We would like to have your thinking on this and other areas of interest for future "Pro & Con" discussion in INFANTRY.—*Editor.*

Sniper - Sayonara

By Maj Leslie B. Enoch

BY DEFINITION, the true sniper is a highly skilled rifleman capable of delivering first-round hits on enemy leaders, communication personnel and weapons crewmen at ranges up to 600 meters. His purpose is to demoralize the enemy by selective killing. Employing stealth and surprise, the sniper attempts to sap the confidence of the enemy by exposing him to accurate, long-range rifle fire against which he has no immediate protection.

The sniper must be physically and emotionally conditioned to his job. A cross between the expert woodsman-hunter and the outstanding soldier-rifleman, he must be thoroughly trained in camouflage, concealment, observation, survival and individual patrolling. Specially equipped and schooled, the true sniper is a specialist who does one job and no other.

This is the theory. There is, however, some question whether or not this true sniper is worth his salt. And there is real doubt that the dual-capacity sniper—who uses issue sniper equipment but is employed as an ordinary rifleman in some situations and as a specialist in others—is capable of fulfilling the mission assigned to him.

True snipers have been employed by few nations. While the Japanese used the sniper in World War II, he was not effective. He was a poor marksman, badly trained and equipped, and "sniper fever" often resulted from chance hits by stray rounds. Many of our units, preferring to aim their efforts at more serious threats, took few anti-sniper measures. The Russians have also employed the sniper. More of a specialist, he has earned a better reputation. He receives highly technical training and, in contrast to the Japanese sniper, is by no means regarded as an expendable, "suicide" weapon. He is used carefully and in specific situations. When circumstances are favorable to his work, he evidently achieves the intended effect.

The point is, however, that the true sniper is most useful in static defensive situations involving extensive troop concentration — just the kind of warfare that nuclear mobility will largely obviate. Current organizational concepts, which visualize a general increase in individual firepower in small, fast-moving, carrier-mounted units, leave no room for the true sniper.

When the mobility of armies was measured in terms of foot movement, the sniper's stealth had a definite place on the battlefield. Now, however, his slow, patient stalking cannot keep pace with an enemy who moves with the swiftness nuclear warfare necessitates. The fact is that modern battle moves too fast for the traditional sniper.

Moreover, when the ordinary Infantryman was armed with a weapon of relatively limited power and accuracy, there was some reason for providing selected personnel with weapons of greater capabilities and with training which would permit these weapons to be applied with telling effect beyond the normal range of small-arms fire. But the trend in individual weaponry is toward maxi-

mum small-arms firepower and accuracy for *every* Infantryman. Thus, the function of the sniper has to some degree been absorbed by the Infantryman at large.

Of course, if we saw fit to produce the Russian type of sniper, it would not be beyond our capabilities to do so. However, in view of the decreasing usefulness of the sniper on the modern battlefield, it does not seem worthwhile to produce such a specialist.

We cannot gamble on a concept which yields doubtful combat results. We operate on a limited budget and our strength is fixed. We should not siphon off key personnel for sniper training if that training doesn't pay off. Production, handling, transportation, supply and repair of special sniper equipment is more costly and complicated than first impressions indicate. And training the true sniper is not a half-way proposition. If he is worth having at all, we must take the time to make him an expert, for the true sniper who is less than that—since he normally operates as an individual and without the support of a rifle squad—would probably be of less use than the ordinary rifleman.

In the past, the United States Army utilized a sniper in the rifle squad. This man was not a true sniper—he did not operate individually or as part of an all-sniper team. In effect, he was a hybrid. Normally, he worked in conjunction with the squad. In special situations, however, his sniper training and equipment were brought to bear to increase the range and selectivity of the squad. There are a number of reasons why even this "modified sniper" may have a questionable effectiveness.

To begin with, his training was insufficient—when, that is, he received any special training. Previous ATPs programmed 37 hours of sniper training in the Advanced Individual Training Phase. This special training disrupted team organization. More important, the Weapons Department of the Infantry School has indicated that the minimum training requirement should be 120 hours. It can only be concluded that the sniper went into battle grossly undertrained for his special job.

Regardless of how well or how badly snipers were trained, issue sniper weapons and equipment are clearly inadequate for the mission assigned the sniper. The telescope provided is so ineffective that many snipers preferred to use their own sights. Issue ammunition is erratic at long ranges. Neither issue ammunition nor the sniper rifle equipped with the M84 telescope possesses sufficient inherent accuracy to permit the sniper to obtain consistent first-round hits on combat targets out to 600 meters. In fact, tests by the Weapons Department have demonstrated that such equipment produces effective results only up to a little more than half that range.

It is true that, with a vastly expanded training program and by employing match-grade weapons and ammunition, we could give the squad sniper the accuracy demanded of him. But again, the question is whether the problems of adapting a precision-type rifle for battlefield use and of maintaining and supplying match-grade ammunition are compensated for by the over-all value of the squad sniper.

Experimental squad sniper and specialized sniper training programs were studied by the United States Army Infantry Human Research Unit. After extended consideration, both programs, designated respectively as Trainfire III and Trainfire IV, were discontinued. It was pointed out that the extraordinary accuracy shooters sometimes spend years in developing is not normally combined with the mental and physical attributes desirable in snipers.

The clinching argument is simply that the new rifle and automatic rifle programs, Trainfire I, Autofire, Trainfire II and Advanced Rifle Marksmanship, will accomplish the mission of training *every* rifleman to engage combat targets out to 500 meters. The extra measure of accuracy at far ranges which might be produced by special sniper training and match-type equipment is not so great as to justify the effort, time and expense involved.

This is not to say that situations in which the sniper is an effective element no longer exist. However, where such situations occur, the best rifleman in the squad can be assigned a sniper-type mission. This procedure is simple and to the point. It is reinforced by the fact that present issue non-sniper equipment produces results which approximate those of issue sniper equipment.

The accuracy and effectiveness of the individual rifleman is constantly increasing. The truth is that, equipped with the M14 and M15 rifles and trained under Trainfire concepts, every rifleman is essentially a sniper. The sniper's effectiveness has not been dispensed with. Instead, it has been broadened and extended.

Wanted: A Killer

By Maj Edward J. Collins

WE HAVE a definite requirement in the Infantry today for a specially trained marksman-sniper with the specific job of looking for, detecting and killing key enemy personnel. This requirement is not new. The sniper has been an important figure on the battlefield of the past. Throughout the history of warfare armies have employed sharpshooters or snipers to kill and demoralize enemy troops by picking off their leaders. General Braddock was the victim of a well-aimed shot at Fort Du-

quesne. Many generals and countless soldiers of lesser rank were felled by the sharpshooter's bullets on both sides in the Civil War. And in World War II, the Russian sniper exacted a significant toll of German commanders.

By killing enemy leaders, members of automatic weapons crews and other key personnel, the sniper has caused the enemy to lose purpose, direction, control—and even the battle.

Some military men today, however, believe that mass-destruction weapons and other developments will lessen or eliminate the need for snipers in modern warfare. Such reasoning is perhaps understandable because powerful new weapons may kill off the leader and his key personnel along with the rest of the troops.

But this line of reasoning is faulty. The astute military thinker recognizes that modern combat will offer opportunities of great significance for small numbers of highly skilled individuals who can *detect* and *kill* selected enemy personnel.

Even granting that selected individuals can be killed deliberately by other weapons in the Infantry arsenal, the sniper is still essential. We need someone with the specific mission of looking for and detecting key personnel. We must have an individual who is equipped and trained to perform this function. Reliance on mass-destruction weapons or the chance detection and killing of the leader by the average soldier who is part of the fire team is not good enough.

It will be no more difficult in the future than in the past for the trained sniper to find his target. The real leader, whether or not he actually holds or wears rank, will identify himself by his location on the battlefield, by his movements and gestures, by the weapon or equipment he carries, by the proximity of communication personnel and by other indicators.

Fast-moving, self-contained units, operating independently over large areas of real estate, will require strong leaders. Such units will be vulnerable to riflemen who can pick off the leader and key personnel—particularly to the sniper who can detect and kill such personnel at distances beyond the effective range of the regular rifleman. The loss of leadership to such units can be serious, even disastrous.

Furthermore, long-range targets can be expected to appear more frequently, and infiltration by enemy snipers and small units can be expected to be more common. Such conditions will offer increased possibilities for the use of the sniper.

While the requirements for the sniper are just as valid today as they have ever been, we do need more detailed and more specific doctrine for his employment. That doctrine must provide for use of the sniper in both the offense and the defense.

In the attack the sniper may be used effectively to pick off personnel in the gaps between our units or on the flanks of our attacking elements.

In the defense, he should be positioned so that he has observation not only forward of, but within the battle position. He can then engage the enemy at long range, close in and within the battle position itself. The sniper can also be used to cover gaps, either from positions within the gaps or from the flanks of adjacent units.

He can be given a mobile mission as well, moving about the battle area either on foot or in vehicles, as the situation demands, and seeking opportunities to harass the enemy and kill his leaders.

In retrograde movements his job would be to support the elements left in contact by further delaying the enemy. He would locate himself at critical points—road junctions, defiles or stream-crossing sites. As always he would kill key personnel, thereby creating confusion and delaying the enemy's operations.

Our doctrine must spell out applications such as these—there are others—so that we can get away from concepts which consider the sniper a part-time specialist to be used on special occasions at the whim of the commander.

In addition, we must provide a definite place for the sniper in our organization so that he can be a full-time operator. Missions for the sniper must be included in the operation order just as for other supporting weapons. Properly employed by a commander who understands his value, the sniper can be of great service now and in the future.

Some critics who advocate the elimination of the sniper claim that we cannot afford to devote the time, money and effort necessary to train and equip this specialist properly. These critics maintain that we should concentrate on producing better riflemen over-all. Of course we should make every effort to train better riflemen, but such efforts will continue to produce some men who stand out from others as exceptional marksmen—a source to be tapped for snipers. Exceptional marksmen will be discovered through Trainfire I, our new system of basic marksmanship training. Some of these men can be earmarked for further training.

As for additional training, the competitive marksmanship program will fill part of this need in peacetime. In wartime potential snipers can be developed along the lines prescribed by ATP 7–200 and sent through replacement channels identified by MOS. Assignment of the partially trained sniper to a seasoned sniper as a "buddy" would further his training. We manage to train other specialists in wartime. Certainly we can find time to train this killer.

The time and effort necessary to train and equip the sniper will be well spent. Give him one mission—to kill key enemy personnel—and he will more than pay his way in combat.

The Changing Face of

THE INFANTRY

THIS is a continuation of the pictorial feature which was started in the last issue of *Infantry*. The purpose of the feature is to provide a periodic look at the constantly changing facilities and activities at the Infantry Center. It is hoped in this manner to help Infantrymen who are scattered around the globe to keep in closer touch with their Infantry home at Fort Benning.

New ranch-type officers' quarters add a touch of suburbia to the residential area of the main post. Constructed to provide better housing for captains and majors, three-bedroom duplex quarters for 20 families were completed last year.

Briant Wells Field House, named for Maj Gen Briant H. Wells, a former commandant, is located in the center of the main post, opposite Doughboy Stadium and Gowdy Baseball Field. The field house is equipped with a swimming pool, two basketball courts, two handball courts and a judo room, and is the scene of many year-round sporting and civic events. A balcony overlooking the basketball floor contains weight-lifting and boxing equipment.

Opened in early 1957, a large, com-

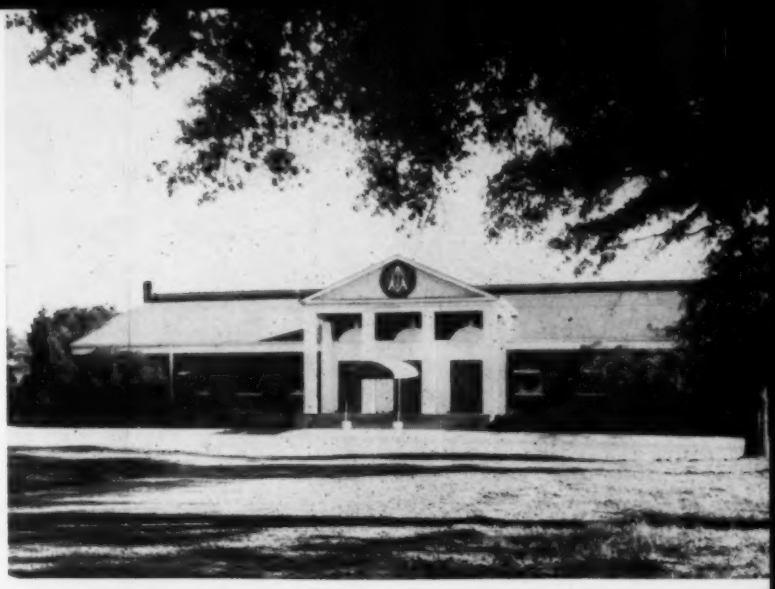
- TOP — New ranch-style officer quarters.
- CENTER — Briant Wells Field House.
- BOTTOM — Main Post Exchange.

CENTER

pletely modern Main Post Exchange provides military shoppers in the Fort Benning area with air-conditioned shopping comfort. With the commissary and milk bar to its rear and flanked by two rows of modern shops—uniform, tailor, appliance, barber, beauty, laundry, shoe repair, watch repair and photo—and a snackbar, the PX forms the hub of a convenient shopping center.

Thousands of Infantrymen of many nations will long remember the ever-popular Biglerville Mess. Now renamed Crain Hall as a memorial to Medal of Honor winner T/Sgt Morris E. Crain, this attractive brick structure is being converted into a beautiful noncommissioned officers' mess and club. When completely refurbished, using $65,000 of nonappropriated funds, the new club will have a terraced dining room, a large ballroom and lounge, a barroom and other facilities.

Fort Benning now has two on-post drive-in snack bars. The one pictured here is located on the main post near the Airborne jump towers. An almost identical drive-in serves 2d Infantry Division personnel in the Sand Hill area.



- TOP — Crain Hall, new NCO club.
- CENTER — Drive-in snack bar.
- BOTTOM — Post Exchange shops.

AUTOFIRE

Using the principles employed with the rifle in Trainfire I, a new course of instruction, Autofire, has been developed by the Infantry School for training with the automatic rifle.

By Maj Leslie B. Enoch and Lt Virgil E. Moore, Jr.

ACKNOWLEDGED deficiencies in the effectiveness of our rifle fire during World War II and the Korean War prompted studies to determine why our combat soldiers lacked skill and confidence in the delivery of aimed fire. These studies in turn led to a research project, called Trainfire, to find methods for improving our rifle marksmanship training.

By this time most Infantrymen are familiar with Trainfire I which has been adopted by Department of the Army and is now being implemented Army-wide for all basic individual rifle marksmanship training. And *Infantry* readers have at least a speaking acquaintance with Trainfire II which is designed to train the rifleman to function effectively as a member of the Infantry squad. This phase of Trainfire is discussed in this issue beginning on page 21.

It is doubtful, however, if many Infantrymen have heard of "Autofire," the United States Army Infantry School's proposed course of instruction for the automatic rifle.

Autofire stems from Trainfire I. When the Infantry School recommended to USCONARC that Trainfire I be adopted, it pointed out that comparable training had not been considered for the automatic rifle. Consequently, in January 1957, Headquarters, USCONARC directed the Infantry School to study the requirement for such training and submit a proposed course of instruction, using as a guide the principles developed for the rifle in Trainfire I. The resulting course was called Autofire.

Autofire, like Trainfire I, is based on a number of fundamental premises concerning the battlefield:

1. Enemy personnel targets are rarely visible except in a close assault.

2. Most combat targets consist of a number of men or objects linear in nature, irregularly spaced, and using cover such as ground folds, hedges, foxholes, bunker emplacements and borders of woods or ditches.

3. These targets, detected by smoke, flash, dust, noise or movement, are usually seen only fleetingly.

4. These targets can be engaged by using a nearby object as a reference point.

5. Selecting an accurate aiming point in elevation is difficult because of the low outline and obscurity of combat targets.

6. The problem of proper elevation is complicated by using a six o'clock hold on the bull's-eye to achieve a center hit. This procedure introduces an error which is half the diameter of the bull's-eye. The error introduced is increased if the soldier is required to aim at the center of the mass of a field target rather than at its lowest visible edge. Since only part of the actual mass or bulk of the target is usually seen, the center of visible mass will normally be above the actual center.

7. Combat targets for the rifleman seldom exceed 300 meters; however, the automatic rifle may engage targets at greater ranges. The inherent stability of the bipod, the automatic fire capability and dispersion of the cone of fire permit area-type targets to be engaged effectively up to 500 meters.

8. Conditions of combat complicate the detecting and engaging of camouflaged targets beyond 500 meters. Therefore, the squad leader, or member of the squad, must assist the automatic rifleman to detect targets and adjust fire at greater ranges.

9. The nature of the target, the terrain on which it appears, and the tactical employment of the weapon usually favor the use of positions in which the bipod can be used, i.e., the prone and standing-foxhole positions. However, the hip-firing position is required in the assault, and the aerial target position is used for firing at parachutists and slow-flying aircraft.

10. A battlesight setting and hold-off normally are used to engage combat targets 500 meters or less in range. Observation and adjustment of fire are necessary after each burst.

The first six of these premises are the same as those upon which Trainfire I is based, except that foxholes and bunker emplacements—considered likely targets for the automatic rifle—are included in the second premise.

The objective of Autofire is to develop an automatic rifleman who can detect and effectively engage single, multiple and area combat targets at ranges up to 500 meters. To accomplish that objective in a minimum amount of time, a 48-hour training program has been developed. See Figure 1, next page.

The program requires eight hours less than the course prescribed in FM 23–25 which it is designed to replace. When the recently adopted M15 rifle replaces the Browning automatic rifle, additional training time will be saved. The four hours devoted to mechanical training, functioning and maintenance with the BAR can be eliminated, since instruction in these subjects for the M15 is identical to that given in earlier training for the M14 rifle.

During the two-hour orientation period the soldier learns the scope of Autofire. He is shown how it ties in with Trainfire I and II, and he is given the history, characteristics, capabilities and limitations of the automatic rifle. At this time he also learns how the weapon operates, to prepare him for the two-hour "early firing" period which is designed to motivate his interest in further instruction.

The early firing period is followed by a four-hour period on maintenance. This instruction is presented early in the course so the soldier will realize the importance of proper care of this weapon and will better understand how it functions.

Autofire preparatory marksmanship training can be conducted on the Trainfire 25-meter range. The 14 hours which remain (after the two hours devoted to early firing) are scheduled in three four-hour periods and a two-hour period during

TRAINING PROGRAM

Subject	Hours
Orientation	2
Early Firing Period*	(2)
Maintenance	4
Preparatory Markmanship and 25-Meter Firing	16
Battlesight Zero at 75 Meters	4
Field Firing	14
Record Firing	8
Total	48

*Included in the 16 hours allotted to Preparatory Markmanship and 25-Meter Firing.

Figure 1. Autofire Training Program.

which the soldier fires a 25-meter course to test his ability. These periods may be scheduled either consecutively or at intervals.

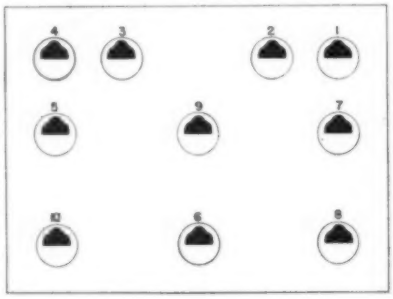
In the first four-hour period, emphasis is on positions, aiming and trigger control, which together constitute the "integrated act of shooting." The instruction consists largely of conferences, demonstrations and practical work. However, some zeroing and grouping exercises are fired. In the second four-hour period, the fundamentals of preparatory marksmanship are continued and instruction in battlesight setting, magazine changing, body shift to engage targets in width and depth, and the hip-firing position are added. The third four-hour period requires a continuation of these exercises and, in addition, an explanation of trajectory and hold-off and instruction in the standing-foxhole and aerial target positions. The two-hour firing period concludes the preparatory marksmanship training. Firing is scored and the results are used to determine the individual's readiness for the field firing range.

The half-silhouette targets which are used for all 25-meter firing help the soldier in his transition (Figure 2). Targets 1 through 4 are used for zeroing, grouping, trigger control and automatic fire exercises. Firing is from the prone and standing-foxhole positions. During one of the exercises the firer is required to move rapidly from the hip-firing position to the prone position. Silhouettes 5 through 10 are used for an automatic fire exercise which includes trigger manipulation, magazine changing, and body shift to engage targets in width and depth.

After the trainee has completed the 25-meter firing he learns to battlesight zero the automatic rifle. This instruction is conducted on a field-firing range. To obtain the proper sight setting, a three-round shot group is fired at a target at a range of 75 meters. The target consists of a special black and white paster which is affixed to an "E"-type silhouette (Figure 3). Note that there is a battlesight setting "A" for ranges up to 300 meters and a battlesight setting "B" for ranges from 300 to 500 meters. To obtain battlesight "A", the firer aims at the bottom center of the black rectangle and adjusts the rear sight until the shot group hits the top center of the rectangle. This gives the zero for 250 meters, which is used from 0 to 300 meters. To obtain battlesight setting "B," the firer again aims at the bottom center of the black rectangle, but adjusts the rear sight until the shot group hits the intersection of the black cross at the top center of the paster. This zero is for 450 meters and is used from 300 to 500 meters. The battlesight zeros thus obtained are used for all firing during the remainder of the course.

All field firing is conducted on a new range which can serve a dual purpose. The range is so constructed that expansion to 750 meters will permit training with both the automatic rifle and the machinegun. The range has 12 lanes, each of which is 10 meters wide at the firing line and fans out to a width of 50 meters at the far range of 500 meters. There are 18 automatic pop-up targets and one scoring panel in each lane. The scoring panel is located at the far range of 500 meters and serves as an area target.

Figure 2. The 25-meter target.



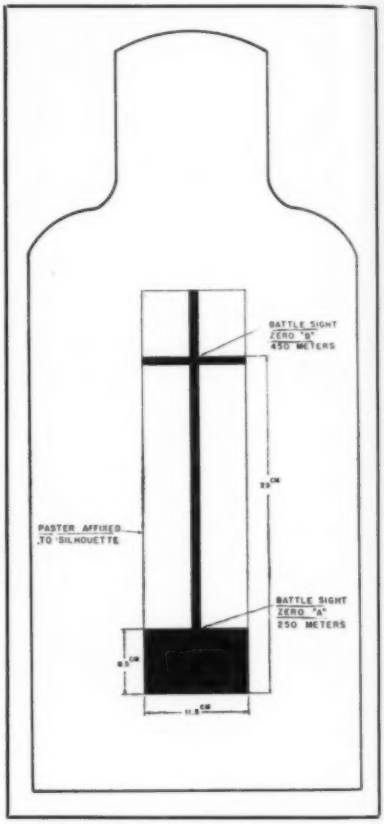


Figure 3. Battlesight zero target.

The company is broken down into two groups of two platoons each and while one group fires, the other group receives concurrent training in a rear area. The 12 lanes are ideal for the ROCID organization. Since the weapons platoon and the weapons squads do not receive this training, there is a lane for each fire team of the rifle squads. Two foxholes in each lane also facilitate the firing. While one man fires from foxhole A, another dry-fires from foxhole B. Then B

fires while A dry-fires. This arrangement permits the team leader to observe the firing and to give maximum assistance to the men of his fire team.

The field firing is conducted in four four-hour blocks, which may be scheduled with a time lapse in between. Since only 14 hours are allotted to field firing, two hours of another ATP subject are scheduled during the last four-hour block as concurrent training and charged to that subject. In each block of instruction, the soldier fires a different phase of field firing (Figure 4). All four phases require the firer to engage targets at varying ranges, in timed exercises. The exercises may be fired on any of the 12 lanes by using different combinations of targets.

In Phase I the battlesight zeros are confirmed and targets are engaged from the prone position. During this period, a review of range estimation and target detection, with emphasis on the far ranges between 300 and 500 meters, is given as concurrent training.

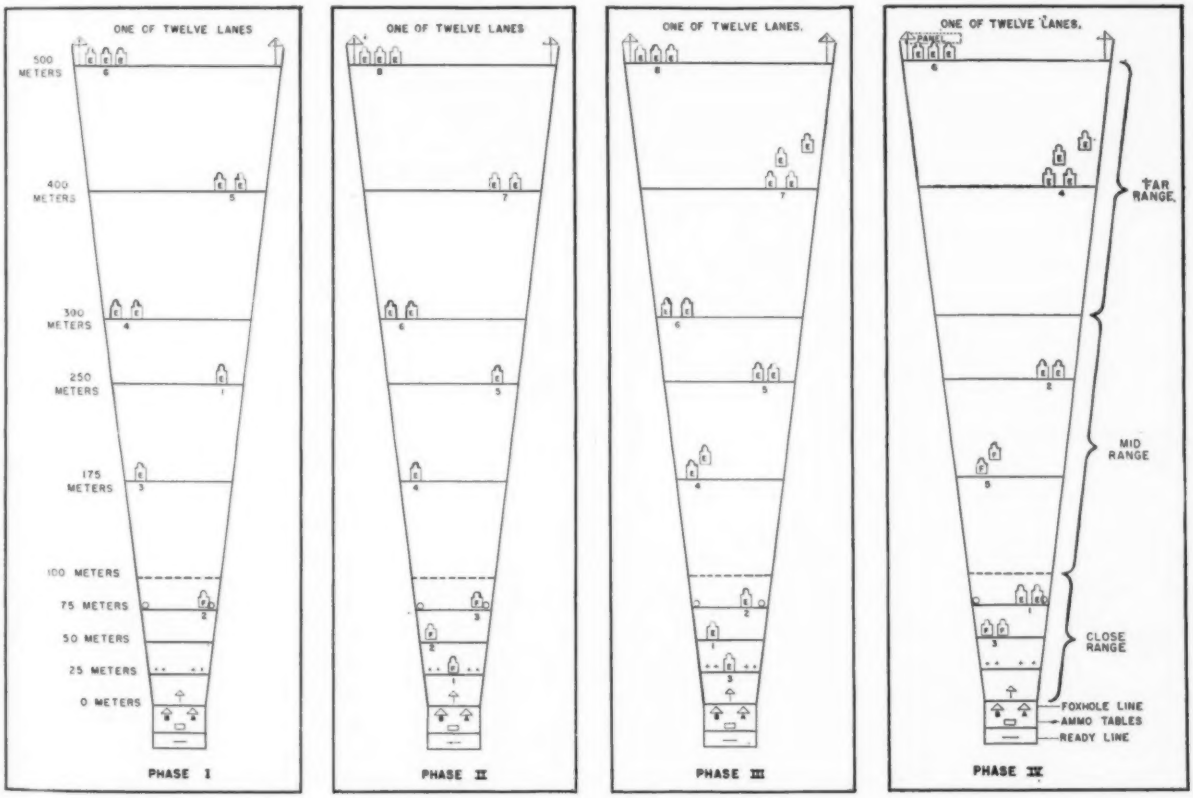
During Phase II, the soldier engages surprise targets from the prone and standing-foxhole positions. Concurrently with this firing, he reviews the fundamentals of preparatory marksmanship training, and receives additional instruction in aiming, positions, trigger control, battlesight setting, magazine changing and hold-off.

Phase III employs a series of close-in surprise targets which are engaged in rapid succession from the hip-firing position. Multiple targets are also used in this phase. They are engaged, in width and depth, from the prone position. The concurrent training consists of additional instruction in range estimation and target detection, with each soldier receiving a maximum of practical work.

In Phase IV, the soldier engages close-in targets from the hip-firing position and then moves rapidly into the prone position to engage targets at far ranges. A scoring panel is hidden at 500 meters. Its location is indicated by smoke or noise. The area target is detected and engaged with a series of long bursts from the prone position. As indicated above, the two hours of concurrent training given during Phase IV are not charged to the Autofire program.

There are two record courses in Autofire, Record Course #1, Phase V, and Record Course #2, Phase VI. Record Course #1 can be superimposed on a Trainfire I record course by extending the range to 500 meters, adding targets in width and depth, and adding area targets with scoring panels (Figure 5, next page). Two Trainfire lanes are utilized for each Autofire lane. There are eight Autofire lanes, 60 meters in width, with 17 automatic pop-up targets in each lane. If the terrain does not permit a range out to 500 meters, a modified course (Course B) can be fired

Figure 4. The four phases of practice firing.



which extends only to 350 meters (standard Trainfire I range). In this case all firing is from the prone and standing-foxhole positions.

Record Course #2 is an assault course run concurrently with Record Course #1 (Figure 6). It puts the soldier through the actions of a rifleman in the attack, although no tactics are taught. There are four lanes, 30 meters wide and 400 meters in range. Under the supervision of an assistant instructor the automatic rifleman leaves the starting point, advances 65 meters and engages close-in surprise targets from the hip-firing position. When all riflemen have reached the phase line of control, the assistant instructor straightens the line, if necessary. The soldier then assaults targets on the objective. When he reaches the crest of the hill, he sights targets at a range of 300 meters which represent fleeing enemy. The firer moves quickly into a position of his choice and engages those targets.

A simple scoring system has been worked out for both the field firing and record courses. Emphasis is on placing a burst on each target. However, full credit is given for one hit. No credit is given for unexpended rounds.

It has been recommended that all riflemen in the ROCID rifle company receive Autofire training, i.e., the rifle company less the headquarters, the weapons platoon and the weapons squads of the rifle platoons. The unit commander will have an opportunity to observe the training and select the best men for assignment as automatic riflemen. However, all riflemen in the company will be capable of assuming this important role.

The proposed Autofire course was submitted to USCONARC for consideration in May 1957, and the United States Army Infantry School subsequently was directed to submit detailed requirements for conducting a pilot test. The requirements were forwarded in September 1957 with a recommendation that the pilot course on Autofire be conducted at Fort Benning. Early last year USCONARC approved these recommendations and the pilot test will be conducted as soon as the ranges are available. Due to funding arrangements this probably will be sometime after July of this year.

Figure 5. Record Course Number 1.

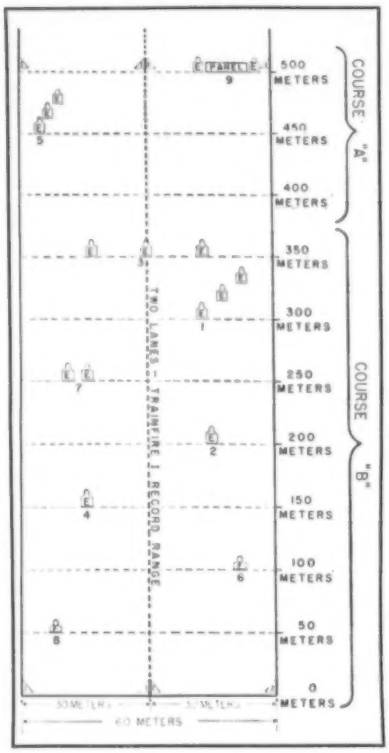
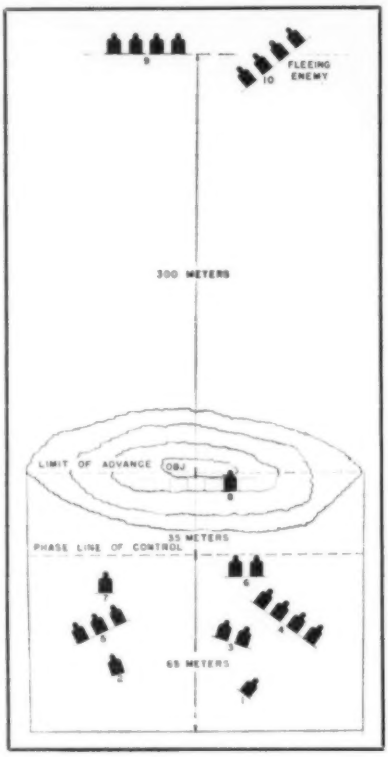
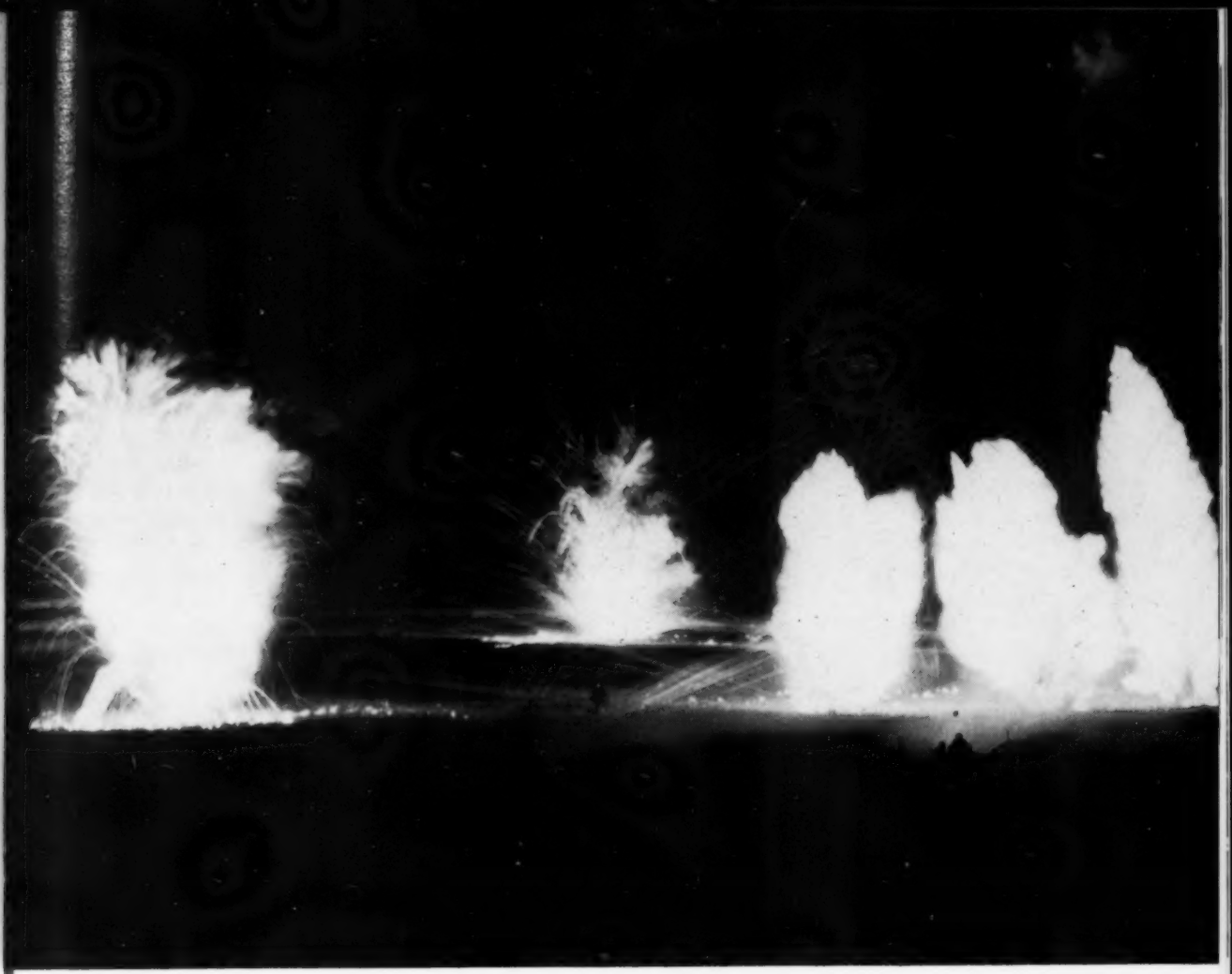


Figure 6. Record Course Number 2.



MAJ LESLIE B. ENOCH is executive officer of the Rifle Committee in the Weapons Department of the Infantry School. He enlisted in the Tennessee National Guard in 1935. Five years later he was called to active duty and served with the 30th Infantry Division. In 1942 he received an OCS commission at Fort Benning and then went to the Pacific Theater of Operations, where he was assigned to the 305th Infantry Regiment, 77th Infantry Division. Following the war he left the service and was a member of the Army Reserve until 1951, when he was recalled to active duty. After completing the Company Officer Refresher Course at Benning he went to the Far East. Following a tour of duty with the 179th Regiment, 45th Infantry Division in Korea, he became an administrative officer at Camp Drake, Japan. Major Enoch was graduated from the Advanced Course in 1954 and was then assigned to the School.

LT VIRGIL E. MOORE enlisted in the Army in 1951 and received his commission through OCS at Fort Benning the following year. He then went to Fort Jackson, where he was a company executive officer and later a company commander with the 61st Infantry Regiment, 8th Infantry Division. He left the service in 1954 but returned to active duty three years later and and was assigned as an instructor with the Rifle Committee of the Infantry School's Weapons Department. Lieutenant Moore is currently administrative officer of the Rifle Committee.



We Must Fight at Night

We must increase our ability to fight effectively at night both with and without electronic, infrared and other technical night fighting aids.

By Lt Col John P. Reames

THE odds are heavy that the combat forces of the United States and the other nations of the free world will be greatly outnumbered in any future conflict. The sheer weight of enemy manpower in a huge land army, together with possible enemy use of nuclear weapons and other advanced weapons and equipment, conceivably could result in severe setbacks for the West, unless we make skillful use of tactics and every human and physical resource at our disposal.

One important, but often-overlooked factor that could help offset our initial disadvantage in any future war is the ability to fight at night. The surprise and psychological advantage achieved by night attacks and skillful night defense could do much

LT COL JOHN P. REAMES received an OCS commission at Fort Benning in 1941. He served with the 98th and 63d Infantry Divisions in the United States before going to Burma in 1944 as a liaison officer to the Chinese Army. He later saw service in China. In 1946 he was named assistant director of training at Camp Stoneman and two years later went to Jefferson City, Missouri as a senior Reserve instructor. He went to Korea in 1950 where he was senior advisor first to the 12th Regiment, 1st ROK Division and later to the 11th ROK Division. He then assumed command of the 515th Field Artillery Battalion at Camp Breckenridge. Colonel Reames' next assignment was in Europe with the Military Assistance Division, Headquarters, U.S. European Command. After returning to the United States in 1956, he was assigned as a project officer with the Combat Developments Office of the Infantry School. He is now chief of the Materiel Section in that office.

to compensate for our initial inferiority in numbers.

Night fighting certainly is not easy, but no form of Infantry combat can be called easy. The difficulties and complex problems of night fighting can be overcome only through planning, training and practice. All of our Infantry units must have the ability to move, patrol, defend and assault during absolute darkness. They must be capable of conducting any type of operation with or without night vision aids, and every man must be a proficient night fighter.

There are three major problem areas in night operations, regardless of the type, size or scale. Fighting at night presents difficulties in the control of units, the direction of firepower and the detection of targets for weapons from the rifle on up. The solution to all three of these problems depends upon the ability of the individual soldier to fight during the hours of darkness.

Before entering the Army, a large number of our soldiers spend most of their lives in towns and cities. They rarely venture beyond the range of street lamps. When such men are first taken into the dark, they are relatively helpless. They are startled by every shadow, stumble even on level ground, make a considerable amount of noise, and are generally so confused or nervous that they certainly are not effective. Yet, by a short course of instruction in darkness adaptation, these same men can be trained to work together confidently, even on the darkest night. Once they have gained confidence, it is comparatively easy to train them further.

If we in the Infantry do not attain and maintain an ability to fight effectively at night, the enemy will be quick to exploit our weakness. During World War II, Japanese intelligence disseminated the information that American forces habitally broke contact at 1600 hours to dig in. Night attacks by Japanese units increased after this announcement. The Chinese Communist forces in Korea inflicted terrible casualties using night "swarm tactics," starting with an attack on the 8th Cavalry Regiment. This unit lost a thousand men in *one night* at Unsan, on 1 November 1950.

The Soviets, too, are well aware of the advantages and importance of night operations, as illustrated in this comment from their *Handbook for Sergeants and Privates*: "The night is a faithful and reliable helper of the soldier. It has never disappointed those who knew how to profit by its advantages and who were familiar with the peculiarities of night. Generally speaking, the darker the night, the worse the weather, the better it is for the brave and proficient soldier."

Unlike most American troops, the average Soviet soldier is born and raised far from big cities. From early childhood he is accustomed to covering long distances across difficult terrain, orienting himself by conspicuous features on the ground, by the stars, and often by simply following his natural instincts. Even though their soldiers have this natural ability, it is estimated that 50 percent of the present Soviet tactical training is devoted to night training.

Despite our apparent dislike of night operations, many American units have used them to great advantage in the past. Infantry night attacks were successful in both world wars and in Korea, and occasionally were even supported by tanks. The 104th Infantry Division conducted more than one hundred successful night attacks during World War II, many of which were regimental and combat-team size. The 30th Infantry Division conducted successful regimental and divisional night attacks.

In Italy, during the month of February 1945, one battalion of the 10th Mountain Division conducted a night assault up cliffs in fog and snow, achieving complete surprise and success. One squad leader panicked and his men were ambushed; otherwise the battalion suffered no casualties. On the next night a full-scale division night attack succeeded in securing Mount Belvedere, whereas numerous daylight attacks against the same objective by other divisions had failed.

Although techniques have been revised and equipment has been improved, the principles of night operations have remained essentially the same for centuries. The night operation must be based upon a simple plan, and detailed instructions must be prepared to carry it out. The operation must be preceded by a careful and complete reconnaissance, it must be thoroughly coordinated and it must be executed with precision. Adequate secrecy and security measures must be included in the operational plan to insure surprise. Upon reaching the objective, units must reorganize quickly in dispersed positions to withstand a counterattack.

Normally night attacks are executed by reserve units, since reserve

troops are rested and their leaders have adequate time to perform full reconnaissance. As is true with any well-planned attack, a night attack should be preceded by a coordinated rehearsal—over similar terrain if possible.

Upon analysis it will be seen that most of the principles for night operations are merely modifications of daylight techniques for use at night.

When the situation demands it, we must be able to fight during darkness without relying on the use of special equipment. However, it is recognized that technical aids will help offset some of the inherent difficulties.

With this in mind, the Combat Developments Office of the Infantry School, working in close cooperation with the instructional departments, is experimenting with certain types of invisible light aids and radar to enhance detection, observation, weapons sighting, navigation and control at night. These include aids that are man-carried or mounted in ground vehicles or aircraft. The tactical employment of these aids will allow friendly attacking units to take maximum advantage of the cover of darkness until such time as secrecy is no longer desirable or required. At this time, visible lights may be employed and the operation will proceed essentially the same as in daylight.

Refinement of the new equipment has now progressed to the point where we can predict when it will be in the hands of the troops. These developments are being made with the knowledge that the Soviet Army is also making progress in night fighting aids. Their equipment can detect our sources of active infrared light—such as flashlights, searchlights and vehicle headlights with infrared filters—just as readily as we can detect theirs.

Several new items can now be added to the list of equipment on hand to increase the effectiveness of our units in night fighting. The equipment is designed to help the Infantryman find the enemy in darkness and engage him with aimed fire. It is of two general types: vision aids, and electronic aids for surveillance and target detection. All of the items are now in being, although some of them are being refined for lighter weight, greater range and more reliability. The allocation recommended by the Infantry School will be discussed here in general terms. First, let's examine some of the aids to night vision.

Figure 1. T-1 infrared sight mounted on the carbine.

In the field of visible illumination, a typical example of the new equipment is the active infrared principle as applied to the T–1 infrared weapons sight (Figure 1). Adaptable for use with all Infantry direct fire weapons, this sight is capable of picking up a one-man target in a narrow angle of observation on a moonless night. Its range is several times greater than that of previous infrared sights. The new sight also is used to detect enemy use of infrared equipment, but it is equally susceptible to detection by similar equipment. Complete with power source, the standard T–1 sight weighs far less than the World War II version, and developments indicate that its weight may be reduced even further. Because of the relatively high cost of the T–1 sight, the Infantry School recommends that issue be made on the basis of one for each platoon and company headquarters.

For those weapons which are not allocated a T–1 sight, the new Multilite sight[1] appears to offer great promise. Multilite is a sturdy, lightweight, inexpensive sight which allows the Infantryman to aim his weapon under any condition of visibility. Activated by available light, the new sight consists of two posts which fit over the regular front and rear sights of the weapon. The Multilite sight has luminous dots and reflective surfaces which, when aligned, give greatly increased accuracy at battle ranges up to 300 yards. When finally produced in quantity, this sight may be either a snap-on or a flip-over type. It

[1]See "Multilite" in the October-December 1958 *Infantry*.

may be permanently mounted in a manner that will not interfere with the regular sights. Prototypes of the Multilite sight have been applied to and tested with all Infantry direct fire weapons. Even the 106mm rifle gains accuracy when fitted with this amazingly simple device.

Another new item of equipment for night operations is the image metascope (Figure 2). A small, portable viewing device using the infrared principle, the image metascope

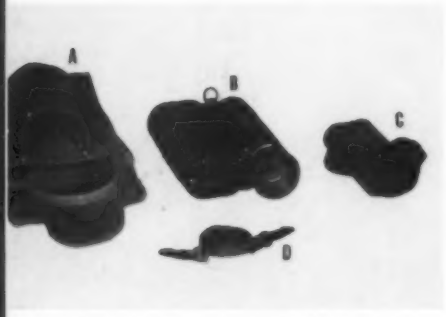


Figure 2. Components of the image metascope kit: A — carrying case. B — metascope. C — infrared flashlight. D — carrying strap.

will be invaluable for invisible detection of enemy infrared equipment, because it is not detectable by the enemy. It is carried either on a neck strap or in a belt-mounted case, and it develops power from a built-in hand-crank generator. The addition of a near—or active—infrared flashlight will broaden the usefulness of the metascope. It is anticipated that the metascope will be issued on the basis of one per platoon.

A new set of infrared binoculars has been developed to allow walking, driving and even maintenance tasks to be performed with relative ease in areas covered by infrared searchlights, flashlights and headlights (Figure 3). Battery-powered and head-mounted to leave the hands free, the T–6A binoculars provide a range of vision suitable to the tasks of the user. They will be issued to leaders and gunners who must maintain control of troops and firepower. Drivers, litter-bearers and wiremen also may use these binoculars when working in the dark. A convertible, visible-infrared flashlight will be provided to each wearer of infrared binoculars.

Newly developed infrared filters for the headlights of all tactical vehicles will allow vehicle loading, driving at normal speeds, and even maintenance to be performed with comparative ease. These filters will be available for mounting on the 30-inch searchlights which will be used

Figure 3. T6A binoculars.

with Infantry personnel carriers and tanks for general-purpose battlefield illumination. They allow the use of invisible light on the battlefield to aid individuals equipped with infrared viewing devices or infrared binoculars. When the need for surprise is past or when the enemy is using infrared devices, the simple filters allow quick conversion of our searchlights to visible light, thus eliminating the effectiveness of enemy infrared equipment. The light thus provided will vary from the level of bright moonlight to the brilliance of an overcast day, allowing the further conduct of operations as in daylight.

A navigational automatic position finder is being developed and will be invaluable for vehicle navigation in darkness as well as daylight.[2] By looking at the face of the instrument, the vehicle commander will be able to locate his position in eight-digit map coordinates at any given time. The instrument also will give the headquarters a "fix" on the vehicles at all times. By aligning two direction-indicating needles on the face of

Figure 4. Navigational automatic position finder.

[2]See "Vehicle Navigation," July-September 1958 *Infantry*.

the dial, the driver can keep the vehicle on course at all times (Figure 4). It is visualized that this instrument will be issued on the basis of one per squad and platoon headquarters of Infantry personnel carrier units.

To provide early warning of the enemy use of infrared equipment, a new infrared warning device has been developed. This small, eight-ounce instrument is equipped with an ear plug and will be carried on the soldier's person. An audible warning is produced when the device is subjected to infrared radiation. It is anticipated that an instrument of this type will be issued on the basis of two per platoon.

A new "package" of observation equipment, known as the Unit Commander's Observation System (UCOS), will give the battle group commander night eyes for his observation post (Figure 5). Consisting of a 24-inch searchlight, a near infrared telescope and a generator, the UCOS will be effective to distances as great as the range of the battle group's organic fires. It can be used with either a vehicular or a ground mount.

In addition to these improved vision aids, new items of electronic equipment have been developed recently to perform surveillance and target detection in both daylight and darkness.

An infrared intrusion detector will detect the presence of hostile forces in friendly areas (Figure 6). Resembling a television camera, the intrusion detector is capable of detecting variations in temperature. The body warmth of humans or the engine heat of vehicles sets off an audible signal in the intrusion detector, thus warning the operator of enemy movement. Operated in pairs like machineguns, the intrusion detectors are mounted so that their beams cross and form an infrared "final protective line" in front of friendly positions. Two of these devices are expected to be issued to each rifle platoon of the Infantry division battle group.

A new rifle company surveillance and intrusion device has been designed. Consisting of a radar with a range commensurate with battle group organic fires, the present model weighs 70 pounds and makes a two-man load (Figure 7, next page).

Two new surveillance devices have been recommended for the battle group. These truck-mounted units will be able to search the entire battle group area of responsibility in less than four minutes.

Figure 6. Infrared intrusion detector.

Figure 5. Unit Commander's Observation System.

A moment's thought about all that has been said so far will reveal that, while all of these items of equipment are new, the principles upon which they are based are well known. But the new *combination* of items and principles previously used separately will increase the unit's capability and help to insure its success in night operations.

For many years we have had night vision and night firing aids in the Infantry, but few commanders knew what the equipment could do, and little use was made of it in the field. Most units treat equipment like the sniperscope and the metascope with kid gloves, afraid that such items will be broken during training. The result of this attitude is that the equipment is often left to gather dust on supply room shelves. Infantry School doctrine advocates taking full advantage of all available aids to night fighting, for even the most advanced

equipment in the world is valueless if it is not used.

The introduction of these new aids to night combat is resulting in certain changes in the concept of night operations. As an example, the use of Infantry personnel carriers equipped with automatic navigation-position finders and convertible searchlights will increase the Infantry's speed and effectiveness in operations which do not require movement by stealth.

Although the familiar terms "illuminated" and "nonilluminated" night attack are still being used, the introduction of new night fighting aids renders these terms somewhat deceptive. For instance during the *nonilluminated night attack,* visible light is not used, but certain invisible light aids, such as radar and infrared, are employed. The term *illuminated night attack* means that the operation is supported by visible light and can be conducted almost the same as in daylight. Visible light provides more freedom of movement and allows support by Infantry personnel carriers and tanks to speed the rate of advance.

In either of these general types of attack we must prepare both a *light plan* and a *fire plan* to cover all phases of the attack. An attack initially planned for stealth might suddenly require effective visible light and fire support. Both must be planned for, just as we plan for alternate means of support in any other type of operation.

During the movement to contact, all aids for control and communication should be exploited fully. All available invisible light equipment should be employed when advantage may be gained from its use. When the element of surprise is lost or no longer desired during a nonilluminated attack, the commander may decide to switch searchlights from infrared to visible light, conducting the remainder of the attack as in daylight.

Even when we have no night vision equipment, there are many other aids available to help in the conduct of a night attack. Although the effective use of arm-and-hand signals is eliminated by darkness, radio, telephone and dim flashlight signals may be used for control purposes. The "Individual Soldier's Radio" in the hands of squad and fire team leaders will also improve control (Figure 8). Both identification and control are simplified when luminous arm bands or helmet markers are used. Patrols may be used to place luminous markers, white engineer tape and other similar material for marking assembly areas and lines of deployment.

Figure 7. "Silent Sentry" target acquisition radar.

The use of tracer ammunition and illuminating projectiles will assist greatly in marking the objective area. Dogs and messengers may be used widely to supplement other means of communication.

We must avoid establishing a predictable pattern in our night attacks. The combination of time, formation and means employed must be altered with each operation. Crew-served weapons, particularly machineguns, should be moved after firing because the enemy will take steps in his counterattack for their early neutralization, based on the last position known to him.

Extra ammunition must be carried during night attacks because of the difficulty and time required for resupply after the move starts. Ammunition vehicles normally will follow the attacking troops, but if they do not, extra men must be detailed to the heavy weapons sections and to the medical aid section to save load-carrying time.

Once the enemy has discovered our attack, we should make full use of flamethrowers, recoilless rifles, demolitions, rocket launchers and grenades to increase the psychological advantage of our attacking troops. Infantry personnel carriers, tanks and helicopters may also be used to bring in additional troops and increase enemy shock and confusion after our attack has been discovered.

Possibly more important than any other portion of the operational plan is the necessity for reorganization to regain control after the objective has been taken. If the plan requires that the objective be occupied, the area must be organized with dispersed and dug-in positions to minimize the effects of enemy artillery and nuclear fires and to insure that his counterattack can be defeated. When the operational plan does not require occupation of the objective, plans must be made for reorganization of the attacking troops in the objective area before they continue the advance.

Whether in offense or defense, night dispositions of security elements

must be made so as to provide early warning of hostile movements. Failure to do so may result in *our* surprise, rather than the enemy's. Outposts and listening posts should be placed to cover trails and other avenues of approach to the position area, and counterreconnaissance measures must be taken to deny the enemy knowledge of our intentions.

The Infantry School envisions that illumination normally will be used in night defense. The presence of the enemy is detected by our outposts with their infrared intrusion detectors and warning devices. The outposts then relay this information through command channels to headquarters, where instructions are given to the target acquisition radar for pinpoint checks in the suspected area of enemy approach. When radar or infrared surveillance indicate that the enemy is advancing in force, the searchlights available to the unit are turned on. These lights, according to the commander's decision, may be invisible infrared lights to maximize the advantage of our night sighting aids, or they may be visible lights to neutralize infrared equipment in the hands of a well-equipped enemy. Illumination from the lights mounted on Infantry personnel carriers, together with the searchlight units in support, allows the conduct of the defense to be essentially the same as in daylight.

Training in the tactics, techniques and procedures of night operations must be complete and continuous. It must not be scheduled by infrequent blocks of time which include sleep, travel and administrative tasks. Schedules should require four or five days and nights of continuous operation, as opposed to blocks of only two or three hours at a time. A minimum of one full week out of each sixty days should be spent in the field, during which time emphasis should be placed on night operations. Essential administrative and maintenance duties during these periods should be performed during daylight. Troops would then become accustomed to training at night and sleeping in the daytime.

Full use should be made of Ranger-trained officers and NCOs during our night training activities. Ranger-type training is especially valuable in night combat, and Ranger personnel may be used profitably to supervise, umpire and train other personnel of the unit in night fighting techniques.

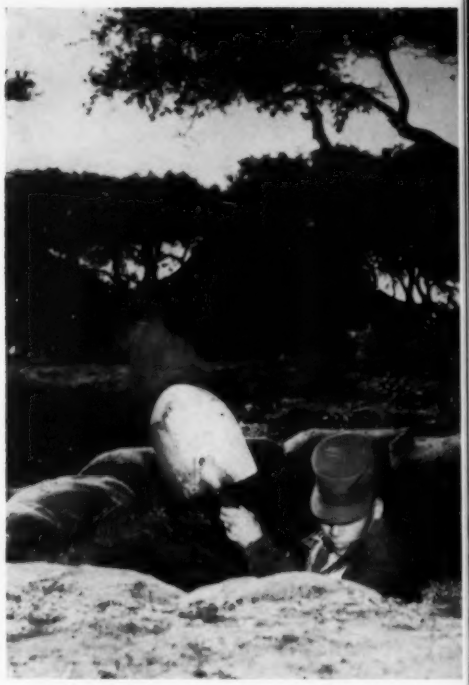
Remember that night fighting is no longer a special operation. The principles are basically the same as in daylight, with appropriate modifications for night combat. Make full use of all available aids for night operations—don't store them in the supply room until the annual IG inspection, or use them only for CP security.

Figure 8. One version of the helmet radio.

In nine cases out of ten, the very conditions under which we fight at night require the Infantryman to play the decisive role—for no one else can do the job. The Infantryman always has been and will continue to be the decisive striking force, both day and night. But he must be ready!

Infantry magazine has come a long way since its genesis as the Infantry School mailing list. There is a real need for it. The Infantry must speak for itself. When it fails to do so, it not only serves its own arm badly indeed, but it does a disservice to the country. For far too long the glamor of other arms and hardware, such as missiles, have overshadowed the hard core of our military establishment, that is, our Infantry. Of course, they will always do so if the Infantry is quiescent. Being fully confident of the significant role that it can and must play in national defense, it should let itself be heard on every and all occasions and through all possible media.

Lt Gen James E. Gavin (Ret)



The basic training of the Infantry soldier should include factual information and practical work in the protective measures which can be taken against nuclear weapons.

NUCLEAR TRAINING FOR BASICS

By Brig Gen Morris O. Edwards

THE objectives of basic training have not changed very much since World War I. General Pershing's criterion—men who can march, shoot and salute—is still reasonably valid. We must have soldiers who are well disciplined, who know how to take care of themselves and live together in garrison and in the field, and who know how to fire and care for their basic weapons.

Well aware of the complexities introduced into the training of soldiers since World War II, I was somewhat surprised to find, when I was assigned to Fort Ord approximately two years ago, that basic training had not really changed a great deal.

However, three giant steps have been taken in the past two years to modernize our basic training. The first of these is the adoption of a new system of individual rifle marksmanship called Trainfire I.[1] The second is really a refinement or dramatization of traditional fire and movement in small-unit tactics by the formalization of battle drill.[2] The third, which I will describe in greater detail, is concerned with individual and small-unit actions in the face of nuclear weapons.

The major objective of instruction in individual protective measures against nuclear weapons is to provide against the day when they may be used either by our own forces or the enemy's. Training must be such as to avert panic among our troops. Plainly, this objective is rather difficult to accomplish without the actual use of nuclear weapons. Instructions to basic trainees must be quite simple. It is not necessary to give a mass of technical details, nor is it necessary to get into highly classified information. All individuals coming into the Army today have an active curiosity concerning the effects of blast, heat and especially nuclear radiation. Motivation to learn is there. All we need is to devise ways and means of teaching—without increasing training time—which will

[1]See FM 23-71, "Rifle Markmanship Course Trainfire I," September 1957; and "Army Rifle Markmanship Today," by Gen Willard G. Wyman, in the July-September 1958 issue of *Infantry*. Trainfire II, squad training, is now undergoing troop test.

[2]See TC 7-2, "Combat Formations and Battle Drill," January 1957; and "Battle Drill" in the January 1957 issue of *Infantry School Quarterly*.

BRIG GEN MORRIS O. EDWARDS, Chief of Staff of the Alaskan Command, was deputy commanding general of the U.S Army Training Center, Fort Ord, when he prepared the material for this article. Prior to that assignment he was assistant division commander of the 5th Infantry Division at Fort Ord until its inactivation in 1957. He received his commission from the United States Military Academy in 1933 and was graduated from the Command and General Staff College in 1943. Early in World War II he commanded the 65th Infantry Regiment in Puerto Rico and later became G3 of the 63d Infantry Division. In 1944 he went to the European Theater of Operations as an observer, after which he rejoined the 63d and accompanied it to Europe. Later he commanded the 253d Infantry Regiment. Following the war he served in various military government and civil affairs positions in Germany until 1948, when he became Chief of the Information Branch, Armed Forces Information and Education Division in the Office of the Secretary of Defense. After graduation from the National War College in 1953, he went to Korea and served with the Korean Civil Assistance Command and, a year later, he joined Headquarters, Army Forces Far East, in Japan. He then served on the faculty of the Army War College before going to the 5th Division.

give each young soldier sufficient factual information to overcome his fears and some practical work in actively protecting himself against the possible physical and psychological effects of a nuclear explosion.

When we started to revise our basic training program at Fort Ord, we were confronted with two major obstacles to training: first, the lack of good, unclassified, down-to-earth training material slanted at the individual soldier; and second, the lack of trained instructors—our junior officers and noncommissioned officers were almost as poorly informed as our soldiers regarding the effects of nuclear weapons. We discovered a disturbing amount of misinformation among some of our cadre, due in part to variances in the instruction provided by certain schools and publications, and in part to a plain lack of any instruction and a dearth of good unclassified training material. Better material is now available. On 7 October 1957, Department of the Army published a revision of Army Subject Schedule 21–6, "Individual Protective Measures Against Atomic, Chemical, Biological and Radiological Attacks," and in November 1957 a revision of GTA 3–2, "Things To Do Under Atomic, Biological or Chemical Attack." In February 1958 it released an excellent training film, "Individual Protection Against Atomic Attack," TF 20–2531. Reference materials include DA Pamphlet 39-3, "The Effects of Nuclear Weapons," May 1957, which contains the most up-to-date unclassified data. FM 21–41, "Soldier's Manual For Defense Against CBR Attack," 1953, as changed, is helpful but possibly needs updating. Also useful is USCONARC Training Text 7–10–2, "Rifle Company, Infantry Regiment," February 1957 (For Official Use Only).

Preparing Instructors and Materials

Our first step, then, was to send away to school a sufficient number of officer-instructors who upon their return would train both officer and noncommissioned officer personnel in post-level, one-week schools. Actually, this post-level training was extended over a two-week period with attendance scheduled only four hours per day so there would be minimum interference with other training activities.

Initially, our post school was set up, with a program of instruction prescribed by higher headquarters, to train selected officers of the division and the post in the techniques of employing special weapons. Most of these officers were captains and field-grade officers. After conducting the required number of classes, the instructors were directed to modify the program to emphasize individual and small-unit actions and the course was subsequently conducted for selected company-grade officers and noncommissioned officers.

The next step was to prepare appropriate instructional material to be issued to all officers and noncommissioned officers taking part in the instruction of trainees. Preparation of this material was undertaken by our nuclear employment school instructors. It was put out in the form of a company SOP. Attached to the SOP was an annex, a "fact sheet," which gave, in narrative form, sufficient information to provide background material for all basic unit training as well as for small-unit operations. Comments on this material were solicited from USCONARC, the United States Army Command and General Staff College and the United States Army Infantry School, and the revised material was published to the command. A third and most important aid was a printed card bearing in simple language the "do's and don'ts" of nuclear warfare. These cards (Figure 1), like similar handouts on general orders for interior guard and the Code of Conduct, are

now issued to each trainee as well as to individuals in strategic reserve units and all members of the permanent party at Fort Ord.

Revising the Training Program

After the instructional material was prepared, we undertook a wholesale review of the five basic Army training programs utilized at Fort Ord (basic training, advanced individual training for light and heavy weapons Infantrymen, and basic unit training for light and heavy weapons Infantrymen). It was decided in the beginning that no new block of hours specifically for nuclear warfare was really needed. Instead, the old 10-hour block of CBR training was revised to provide approximately four hours on nuclear protection. The remainder of the instruction was to be accomplished by concurrent training and by integrating nuclear instruction into all other appropriate subjects. That is, nuclear instruction was made more a matter of emphasis and full utilization of existing time than of the inclusion of additional time. Lesson plans on field fortifications, first aid, scouting and patrolling, tactics, anti-guerrilla and anti-infiltration security, landmine warfare, night firing, technique of firing and weapons demonstration for advanced trainees all were provided with appendices or inclosures on nuclear protective measures.

Tactical training is particularly appropriate for this type of integration. For example, in the three-week field phase of our basic unit training for Reserve Forces Act trainees we played the nuclear weapon both in the 24-hour Platoon Leader Exercise and the 54-hour Company Tactical Exercise. In the area of field fortifications the requirement obviously existed for some modification of existing model fortifications to provide more realistic nuclear shelters—that is, shelters which would be more resistant to blast and would provide sufficient earth-cover for protection from nuclear radiation and heat effects (Figure 2). It is apparent that further work can profitably be undertaken in this area.

Figure 1. Wallet-size card issued to all basic trainees and other personnel at Fort Ord.

FOR PROTECTION AGAINST NUCLEAR WEAPONS

DIG A FOXHOLE:
Dig a foxhole five to eight feet deep (at least three feet between occupant and ground level).
Cover the foxhole with 18 inches of earth, or if time is lacking, cover it with shelter half or poncho.
Streamline the top of the foxhole.
Reinforce the sides of the foxhole.
Continue to improve the foxhole as time permits.
Stay as low in the foxhole as the situation permits.

IF THERE IS NOT TIME TO DIG:
Take advantage of existing cover (ditch, culvert, fold in ground).
Lie flat, face down, hands under body, eyes closed.
Cover body with shelter half or poncho.

WHEN THE FLASH IS OBSERVED:
Fall to the ground.
Lie flat, face down, hands under body, eyes closed.

WEAR CLOTHING LOOSELY AND BUTTONED.

WEAR STEEL HELMET, GLOVES, SCARF OR HOOD.

CARRY PROTECTIVE MASK.

WHEN IN FALLOUT:
Take cover.
Wear protective mask.
Brush dust from clothing.

IF DIGGING IN A CONTAMINATED AREA:
Scrape dirt from around the edge of the foxhole for at least three feet.
Scatter spoil as far as possible up to ten yards.

PROTECT WEAPONS AND EQUIPMENT:
Dig them in if there is time.
Tie down small items of equipment when not in use.

WHEN DRIVING AT NIGHT HAVE ASSISTANT DRIVER WEAR PATCH OVER ONE EYE.

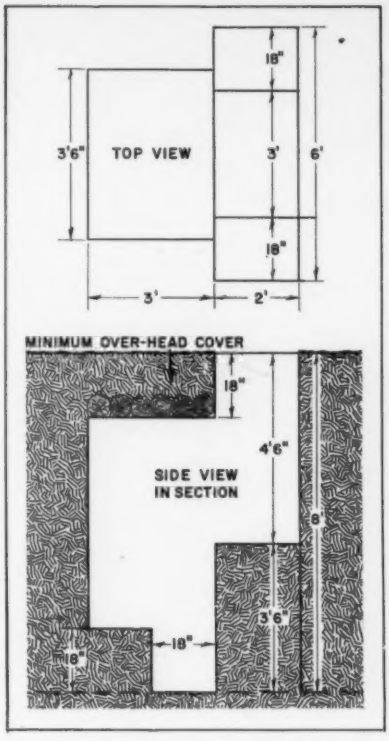


Figure 2. Construction details of a two-man foxhole which provides partial protection against the effects of nuclear weapons.

Use of Simulator Helps

As a catalyst to effective training it was decided to utilize an atomic simulator to be fired three or four times weekly in connection with one of the problems in a close-in training area. The vehicle chosen was the anti-guerrilla and anti-infiltration problem which is conducted under post control. In this four-hour problem trainees are placed in fortified platoon areas with Aggressor patrols and civilians attempting to work their way through designated areas to a guarded area in the rear. A "home-made" atomic simulator is detonated some distance away at a prescribed time. Five minutes prior to blast time a jeep-mounted siren is sounded. This is the signal for all instructors in the area to require their students to take individual protective measures against the nuclear blast.

Initially the explosions were a little too heavy and some complaints were received from nearby commu-

The trainee is taught to keep his weapon in his hole and to wear the protective mask when a nuclear blast is imminent. Note the shelter half which will be used to cover the foxhole.

nities. However, the amount of TNT used was gradually cut down and a local information program was undertaken to allay any unnecessary fears. We experimented with various combinations of explosive, napalm, etc., and were able to produce a more realistic fireball, while at the same time reducing the explosive shock and cost of the demonstration. The simulator now being used consists of two 55-gallon drums of eight per cent napalm and several explosive charges connected by detonating cord. When exploded, this device produces a fireball approximately 80 feet wide and 100 feet high. The mushroom-shaped pillar of smoke rapidly rises 1000 to 1200 feet. Figures 3 through 7 detail the design and placement of this device and provide a cost breakdown. This is a considerably modified version of the locally fabricated device described in "SOP for Atomic Blast Demonstration," Sixth U.S. Army Circular 2–28 dated August 1958.

I was a little skeptical at first about the value of this training aid, but after a few weeks of watching the problem, checking trainees and talking with commanders, staff officers and instructors concerned, I became convinced that it really was worth the time, money and effort. While the effect of the simulator upon individual trainees was not great, I felt its chief value was to dramatize to all of our officers and noncommissioned officers the fact that the nuclear weapon must be considered daily in all of our military activities. As a result of the use of the simulator, together with the other steps described, substantial progress began to be made in other areas of instruction.

Testing Lends Emphasis

Another problem was to redesign

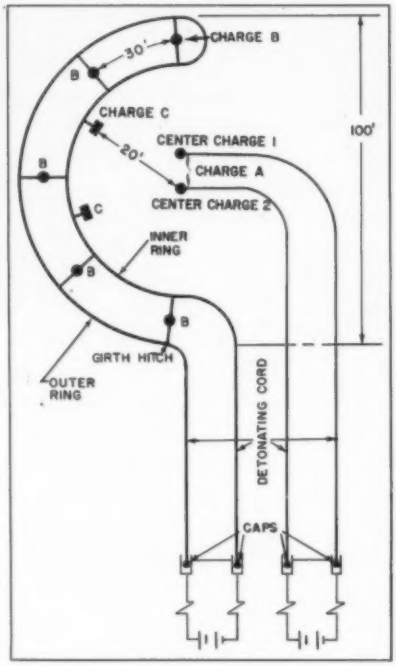


Figure 3. Diagram of layout for nuclear simulator. For Details—See Figures 4 to 7.

MATERIAL LIST

4	Grenade, hand, smoke, WP M15	$10.00
2	Thickener, incendiary, oil	3.80
40	Charge, TNT, 1-lb block	3.80
4	Charge, tetrytol, 2½-lb block	5.00
4	Cap, blasting, electric	.72
5	Cap, blasting, non-electric	.20
2	Drum, steel, 55 gal	2.50
5	Balloon, weather, 300 gram	10.00
	Cord, detonating, petn, 1100 ft	22.00
	Fuze, blasting, time, 5 ft	.05
	Gasoline, 74 octane, 100 gal	17.00
	Carbide, fine grind, 20 lb	1.20
	Total	$90.87

Figure 4. Cost of materials.

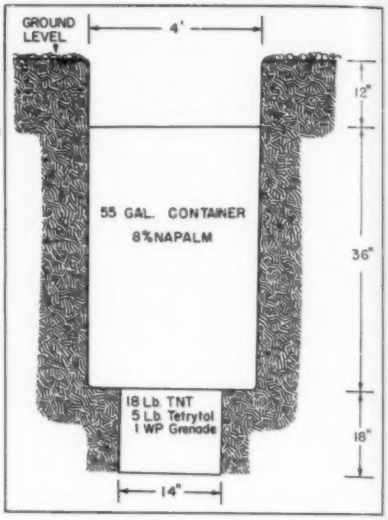


Figure 5. Charge A. The complete charge consists of two 55-gallon drums placed side-by-side over the explosive charge shown. The two explosive charges are connected by one line of detonating cord and each charge is further connected to the firing circuit by separate lines of detonating cord. After the drums are placed in the holes, the soil is replaced and tamped.

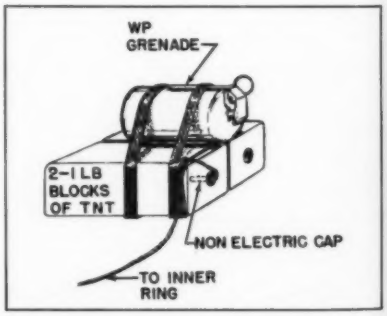


Figure 6. Charge C. The charge is connected to the detonating cord circuit by a time fuze. Friction tape is used to bind the two two-pound blocks of TNT to the white phosphorus grenade.

our proficiency tests to include one or more stations on troop safety measures against nuclear weapons. For the basic training test we simply provide foxholes, each with a BAR alongside and a poncho or shelter half nearby. The trainees to be tested, equipped with gas masks, are told that shortly a nuclear blast will be detonated at some distance away and they are to take immediate individual protective measures. To pass the test successfully, the trainee must put on his mask, jump in the foxhole with the BAR and place the shelter half or poncho over him until the All Clear is given.

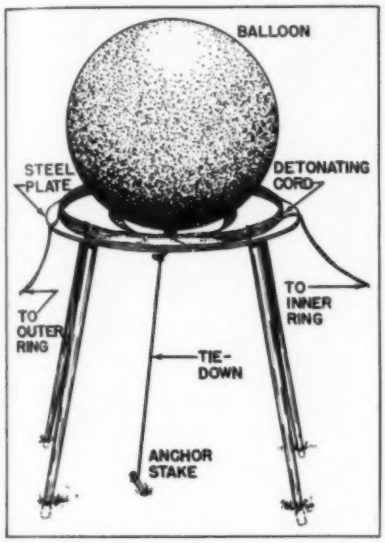
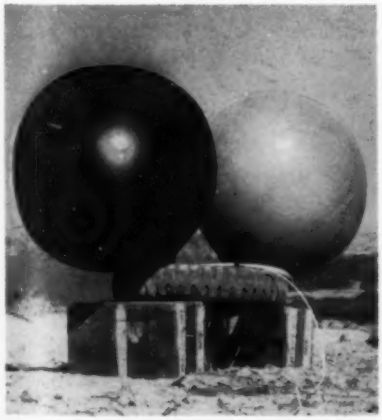


Figure 7. Charge B. The circular steel plate is 16 inches in diameter and ½-inch thick with a beveled center hole eight inches in diameter to accommodate the balloon. The plate rests on four legs 18 inches above the ground and supports the detonating cord which is arranged in five loops 14 inches in diameter.



This field expedient can be substituted for the arrangement shown in Figure 7.

A foxhole covered with a poncho. In the absence of overhead cover, this expedient provides the soldier with some protection from radioactive fallout.

In the advanced individual training test the trainee is placed in a foxhole utilized in our squad-in-defense test. He is provided with an intrenching tool and a cloth. He is told that protective instruments indicate fallout has occurred in the area and he is instructed to take steps to decontaminate himself and his foxhole. His action should consist simply of dusting himself off very thoroughly without leaving his hole, of cleaning his weapon and of lifting the dirt from the bottom, sides, firestep and lip of his emplacement. The contaminated dirt is dumped as far away as he can reach with his intrenching tool.

By these tests we are able to get an idea of how well our instruction has been getting across. The tests also serve as a selective emphasis to spur training commanders and instructors to make sure that all individuals receive proper instruction in this important area.

Additional impetus to our training program was provided during the 1957 Nevada nuclear test series at Desert Rock, when Fort Ord contributed a number of officers and service units. The officers and men involved got first-hand experience with a number of nuclear blasts and were most helpful in passing along their knowledge and impressions to others at Fort Ord. In addition, a number of our senior officers were sent as observers to one of the blasts of the series. This also stimulated the emphasis we desired.

Early in the game the necessity for a good training film on individual protective measures was recognized. Since no top-flight American training film was available until February of last year, we made use of a very fine British film, "Effects of Atomic Weapons on Troops in the Field," MF 20-8598, Confidential, Modified Handling Authorized. The film was obtained through the Signal Corps film library and until recently was shown to all trainees in connection with their nuclear training. We now employ the excellent American Army film previously referred to, "Individual Protection Against Atomic Attack," TF 20-2531.

The Value of Training

Though basic training at Fort Ord has not changed radically during the past year and a half, I believe that by virtue of our emphasis on nuclear training, the whole atmosphere has improved. This step, when considered together with others taken during the

WHY DON'T WE?

Perhaps you have an idea for some item or technique that would help the Infantry. Send it to the Editor of INFANTRY. *If it is published you will receive a free one-year subscription.*

Why Don't We . . .

. . . provide two grommet holes or eyelets in the bottom of the present canteen cover for the attachment of a tie-down thong? Soldiers who must run or double time with the present arrangement find themselves either pounded unmercifully on the hip or forced to hold the canteen in place with one hand. Occasionally, unknown to the soldier, the canteen even becomes detached from the belt and is lost. The result—a statement of charges.

Lt Dandridge M. Malone

. . . take the shoulder weapon away from Infantry officers? As combat leaders we are constantly reminded that our job is to lead (command) troops. While we are performing this job the carbine or its eventual replacement, the M14 rifle, is of doubtful value. In fact, the weapon gets in the way. The officer must carry it slung in order to scan a map, use binoculars, or give hand and arm signals. Moreover, when the enemy gets within small-arms range the temptation to use the weapon is strong. Yielding to this temptation reduces the officer to the status of rifleman at the time when direct and forceful leadership is most needed.

With the adoption of the M14 a solution is possible at no loss to the government. As the TOEs are changed, make the authorized weapon for officers the .45-caliber pistol. With its effective range of 50 yards, the pistol provides an officer with close-in protection when he needs it. Also, he cannot be tempted to act as a rifleman and it frees him of a burden which serves no useful purpose.

An additional benefit could be had from this change-over if every officer were issued a pistol when he was commissioned. He would retain the weapon throughout his service, thereby eliminating paperwork when he transfers to a new unit.

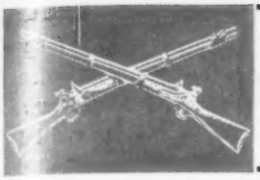
Capt Arthur E. Taylor, Jr.

Continued on page 73

period, has convinced us that no longer are we behind the times in basic training. We do not rely exclusively on passive measures. At the same time we continue to stress aggressiveness, mobility, speed of maneuver and assembly, effective scouting and patrolling, absolute discipline, each man's responsibility of caring for himself, his buddies and his equipment, and the ability of the individual to withstand the shock and rigors of the battlefield.

Emphasis on battle drill has helped. Adoption of Trainfire will further the trend toward effective, up-to-date basic training. Use of the new ROCID organization in our training is also a step forward. When the 5th Division was inactivated we decided to adopt the applicable organizational framework of the ROCID division in our training center—employing battle groups and brigades to introduce ROCID unit terminology to the trainees right from the beginning.

We are definitely *not* preparing our trainees to fight the next war in terms of the last. We *do* believe we are adequately preparing our trainees to become full-fledged replacements for active Army and reserve component units, geared to fight the war of the present or immediate future should it break out the day they join their parent units. We *do* satisfy the soldier's curiosity about nuclear weapons early in the game and give him confidence in himself. While we still emphasize the basic fundamentals of soldiering, we also teach our young soldiers to fight and take care of themselves on the nuclear battlefield. As tactics, techniques, weapons and weapons application change, our training will, of course, have to keep up. However, some type of fundamental, individual protective measures similar to those now being taught will always be necessary, regardless of the complexity of future nuclear weapons and tactics. If this type of training is continued in the units our trainees join, we do not believe they will panic when the first strange weapon goes off in their vicinity.



THE SOUNDING BOARD

This new feature gives Infantrymen an opportunity to "sound off" on a wide variety of subjects. It provides an outlet for thinking which need not conform to doctrine. We are looking for constructive ideas—well-conceived and concisely expressed—which challenge or inform. Articles will be paid for at regular *Infantry* rates.

The Fine Art of Followership

By M/Sgt Forrest K. Kleinman

THE little men with the quilted uniforms waited patiently in their camouflaged foxholes until the platoon was only a few hundred feet from the crest of hill 153. Then their dirty brown fingers pressed triggers and their Russian-made machine-guns began to stammer d-d-d-d-death!

The platoon hit the ground, tried to melt behind rocks and tufts of grass. But the Reds had planned this scene as a massacre. There was no cover.

Recognizing that his platoon must move or die, the platoon leader leaped to his feet. "Follow me," he signaled and lunged forward.

The men of his platoon lay frozen to the illusory security of the earth beneath their stomachs and watched him go. He got as far as the crest of the hill before a burp gun cut him down. He died without knowing that he had charged the enemy alone.

Time soon ran out for the rest of the platoon pin-pointed on the coverless slope. One by one, enemy marksmen picked them off. Before they died perhaps the bitter realization came to some that they would have had a chance if they had followed their leader.

This tragic incident is neither fictional nor unique. One way or another it has occurred in every war of recorded history—not just to green troops, but to veterans.

Why? In moments of life or death why do men sometimes fail to respond to the orders and personal example of their leader?

While many possible answers suggest themselves, all connote failures in followership. Even the possibility that the leader failed to win the confidence of his men, or lost it by his errors in previous combat, signifies faulty followership as well as leadership. For, confidence in the leader poses a two-way obligation. It must be given to be received. It must be sustained in the face of human error and adversity—else it will be lacking when both leader and follower need it most.

Similarly, failure to acquire correct habits of response to orders in training is a matter of poor followership as well as poor leadership. Tactical training provides the "dressage"—the forms of response—for followership in battle. But without voluntary sublimation of self to purpose *by the follower,* no amount of drill will make correct responses instinctive under stress.

Schooling in this fundamental discipline of followership should begin with the enlistment oath. Perfunctory reading and repetition of the pledge at the enlistment ceremony is not enough. By thought-provoking explanation and solemn ritual, its significance should be impressed indelibly upon the mind and heart of the fledgling soldier. A filmed message from the President of the United States in his capacity as Commander-in-Chief of the Armed Forces would be highly appropriate to the importance of the occasion.

Orientation in followership should be continued throughout the soldier's career. This demands more than mere lip service to the old adage, "Tell the soldier why." He should be told why in such a way as to reinforce his willingness to sublimate self to purpose.

Opportunities to relate humdrum activities to important objectives can be found by a thoughtful troop leader in almost anything that soldiers are required to do. The most stimulating orientation talk I ever heard convincingly tied an order for wearing neckties on a 20-mile hike to the success of Allied operations in North Africa during World War II!

The most misused opportunity to teach and to demonstrate good followership that I ever witnessed was in an orientation talk on the Code of Conduct. The "orienter" opened with these words: "Those of you who have actually been prisoners of war probably won't agree with what I'm going to say today. But whether you agree or not, this is the official word from DA. . . ."

Pre-service experience endows some men with a higher aptitude for followership than others. Psychological studies leading to a combat adaptability test, now being developed, indicate that the "fighter"—follower par excellence—has a background of more stable family life, more participation in team sports and more education. In other words, he has

had more practice in subordinating self to the interests of the family, the team and society. So men whose records show a lack of this pre-service experience in followership should be particularly encouraged by unit commanders to take part in team sports, group projects and the Army educational program.

As Gen Bruce C. Clarke stressed in his filmed address to classes at the Command and General Staff College this year, good followership can be developed by all but the mentally ill. Normal men want to belong to the team, want to contribute to its success. Guiding the development of followership consists primarily in helping men to realize their own innate ambition.

Contrary to the tyro's misconception, blind obedience and military followership are not synomymous—but antonymous. No less than leadership, good followership demands the use of imagination and initiative.

Maj Gen William F. Dean, famed combat commander of the 24th and 44th Infantry Divisions, summed up his battle observations on the subject this way: "It takes TWO to take a hill—the ONE who leads and the ONE who follows without hesitation!"

Experiments in group psychology confirm that General Dean's arithmetic is literally true. They show that the physical response of one man in a group to a command or other stimulus is very often emulated by the rest. This characteristic of group behavior is particularly pronounced under tension and when the form of response is familiar to all.

By virtue of his moral and physical position in relation to the group, the leader is set apart. While his personal example reinforces the stimulus of his order, it is only when a member of the group responds that emulation by all is assured.

The initiative of one man—the leader—provides the spark. The initiative of a second man—a follower—provides the tinder. Together, they ignite the whole.

So the exercise of initiative by just one more man on hill 153 might have saved the platoon. If just one man had got up and followed the platoon leader, his action could have triggered the same response in the rest.

From this cursory exploration of the subject, it appears that followership is really leadership once removed on the chain of command. It is the art of converting decisions into achievements.

Since the American chain of command comes full circle and no chain is stronger than its weakest link, it can be concluded that General Patton's famous axiom about field soldiers also applies to followership:

There is no such thing as a good leader or a good follower. A good soldier is both!

M/Sgt Forrest K. Kleinman is an information supervisor at Headquarters, U.S. Continental Army Command. He enlisted in the Army in 1934. The following year he received a reserve commission at Vancouver Barracks and was ordered to active duty with the 15th Infantry Regiment. During World War II he served with the French Training Section of the Joint Rearmament Committee and later commanded a training company at Camp Roberts. In 1945 he became S3 of the San Francisco Main Recruiting Station, and subsequently was adjutant of the 1st Infantry Regiment. He then was named public information officer of the 24th Infantry Division. He left the 24th in 1952 to become Chief of the War Briefing Section in the Office of the Chief of Information after which he served in the Los Angeles branch of OCI. Following a break in service, Sergeant Kleinman reenlisted in 1954. He served as a secretary to General Dean at Headquarters, Sixth U.S. Army, before assuming his current duties at USCONARC. Sergeant Kleinman holds a reserve commission of lieutenant colonel.

Do We Need a Better Sidearm?

By Sgt James I. Allen

The present sidearm of the United States military services, the .45-caliber semi-automatic pistol adopted in 1911, is accepted by some authorities as the finest military sidearm in the world today. Although the 9mm Luger round approaches the .45 in striking energy and has considerably higher velocity, the .45 is generally conceded to be more effective against humans.

Civilian police and sportsmen, however, haven't been content to use this fine combat weapon. To many of them, the .45 service round which has a muzzle velocity of 802 feet per second and muzzle energy of 329 foot-pounds has neither the velocity nor the striking power to fill their needs. As a result, the .357 magnum round was developed for revolvers. It's basically just a .38 special that has been souped up and modified so it won't fit the .38 chamber. This round gives 1450 feet per second of muzzle velocity and 690 foot-pounds of muzzle energy.

This round has proved to be a useful tool for the highway patrolman, since it can go through the metal of an automobile and still have enough energy left to incapacitate an occupant. Sportsmen have adopted the round for long-range shooting and as a standby weapon on big game hunts. Some hunters have regularly killed varmints with it at distances of 100

yards and over. A number of revolvers have been chambered for this round, which is twice as powerful as the .45 service round.

But the .357 magnum had to yield to its big brother, the .44 magnum. This monster fires a 240-grain bullet at 1570 feet per second, giving 1310 foot-pounds of energy at the muzzle. Several revolvers for this round are now on the market, and many sportsmen have adopted the .44 as their reserve weapon in big game country. In the western states, some hunters have been using .44 magnum revolvers to shoot deer and other big game. Neither of these revolvers, however, fills the bill for the soldier.

The service pistol is semi-automatic. It carries seven rounds in its magazine, and extra loaded magazines can be carried. Changing magazines takes only a few seconds. The .44 magnum revolver isn't capable of the sustained fire of the service pistol. It taken only a little practice to fire six aimed shots as rapidly with the revolver as with the pistol, but reloading is clumsy. Even the one .44 magnum revolver that has the modern swing-out cylinder is clumsy to reload compared with the pistol, and the others are very slow.

Where does this leave us? The service sidearm still has less than a quarter of the power of a popular civilian weapon. The .44 magnum will penetrate deeper than the .45, and is more effective against vehicles. Also, the .44 magnum, in the hands of an expert, has a greater effective range. But the .44 magnum round is designed for revolvers, and a revolver doesn't fill the needs of modern warfare.

At close ranges, the .45 automatic *is* an effective stopper. A man who absorbs one of its bullets isn't likely to have much fight left in him. Still, the ballistics of the civilian .44 magnum are tempting. It's probably safe to say that in the next real shooting war a few Infantrymen will forsake the service pistol in favor of the .44 magnum revolver.

Just for kicks, let's try designing a weapon that will have the ballistics of the .44 magnum, but will be a real military weapon. As armchair designers, we won't worry about the details, but we'll combine the best of everything and add a few touches of our own, letting Ordnance take care of the details.

We want an automatic pistol with rapid-change magazines like those we have now. But since we're designing a modern weapon, we want it to be able to do things the old 1911 model would never approach.

Beginning with the ammunition, we'll arbitrarily use a modification of the .45 auto. We'll make the case long enough to hold the powder needed to push a 240-grain bullet at 1570 feet per second, a velocity equal to the .44 magnum.

Instead of the old round-nosed bullet, we'll use the semi-wadcutter design for maximum shock effect. Although civilians use soft lead bullets to do maximum damage, we'll have to stick with a full-jacketed bullet in order to conform to the conventions of war. The flat surfaces of the bullet will do enough damage without the mushrooming effect.

The pistol itself will be stronger than the old .45, and maybe a little heavier. It will be gas-operated, using the same type of gas cylinder and piston as the carbine. The short bolt will function like the carbine bolt, and there will be an external hammer, like the one on the 1911 pistol. The firing pin will be of the inertia type so the hammer can be lowered on it without the danger of a discharge.

We'll make the trigger mechanism the same type as is on the double-action revolver that's so popular these days. This will enable us to carry the weapon with the hammer down and a round in the chamber, and be ready to shoot with just a good hard pull on the trigger. When it's cocked, the trigger pull will be short and light. The thumb safety will work with either thumb.

The barrel and receiver will stay together, except when Ordnance does extensive repairs. Both of the sights will be mounted on this unit, giving greater accuracy than the 1911 pistol. We'll make the barrel six inches long, producing a pistol which is a little heavy and bulky, but which has added accuracy and muzzle velocity to make up for this.

The magazine will hold 13 rounds, like the Browning 9mm which some armies now use. This will give us a good big grip that should be easy to hang onto. We'll have a 50-round magazine for special purposes, which we'll enumerate in the next few paragraphs.

The last departure from the present weapon will be the addition of a switch to convert the pistol instantly from semi-automatic to full-automatic fire. This may seem like an idiotic suggestion. We all know it's impossible to hold a powerful pistol for accurate full-automatic fire. Anyone capable of hanging onto the weapon would soon find it firing back over his shoulder. Apparently, the pistol isn't the right weapon for full-automatic fire.

SGT JAMES I. ALLEN, a graduate of the University of Wisconsin, is a field editor for *The Dakota Farmer*. He enlisted in the reserve in 1954 and for four years was a member of Headquarters and Headquarters Company, 338th Infantry Regiment, 84th Infantry Division, USAR. While with this unit he was a communication specialist, operating the regimental message center and performing other communication duties during summer training at Camp McCoy. In July of last year he was assigned to the 5303 USAR Control Group, XIV U.S. Army Corps. Sergeant Allen has completed the Infantry Pre-Commission Extension Course and is currently enrolled in the Company Grade Extension Course.

But we haven't looked at the accessories yet. Granted, the pistol would be an impossible weapon under full-automatic fire, but it can serve as the basis for a very effective submachinegun. The first accessory is a shoulder stock. It will fasten on with a couple of lugs and a clip or two. Then we will add an interchangeable barrel and receiver unit that features an 18-inch barrel with a pistol grip attached.

Now we have a very fine submachinegun. It can be used with or without the stock, as either a full- or semi-automatic weapon. Since the sights are mounted on the barrel and receiver, we can have an adjustable peep sight on this version. This weapon should be very accurate and have enough power to do some real damage.

The conversion from the short barrel to the long barrel and back again will involve only the normal disassembly procedure that the soldier performs when he cleans his weapon. Only one piece, the barrel and receiver unit, is changed.

The advantages of this kind of system are numerous. In the first place it will cut down on the types of spare parts that must be kept in stock. It will also reduce the training needs.

Ordnance will have to train a man on only one weapon to enable him to service either version, as the only difference mechanically will be in the sights. The soldier will have to learn only one weapon in addition to the rifle. By training on the pistol, he will also learn the submachinegun, requiring only the practice in full-automatic firing for proficiency.

By keeping a supply of accessory barrels and stocks at low echelons, the weapons system can be tailored to meet day-to-day needs. When a man is working in a rear area he will carry a pistol, while a barrel change and a stock will arm him for a night patrol. Weapons of this new design can also be very effective in the hands of guerrillas.

The truck driver who finds himself ambushed can use the weapon as a rifle if the enemy is at a distance, or as a submachinegun if close. The communication specialist can use the weapon as a pistol when he's doing his normal work, and convert it to a submachinegun when he has to provide security for the communication center. The company commander can have a good pistol when he's occupied with administrative work in a rear area, but a submachinegun capable of accurate semi-automatic fire when he has to go forward to make a personal reconnaissance.

In short, a weapon of this type with its large amount of striking power would serve the needs of the soldier whose primary job doesn't usually require personal contact with the enemy, but who needs a means of fighting when things get rough. At close ranges, this weapon, because of its large bullet diameter and specialized bullet shape, would be more effective than the rifle, and much easier to use.

The proposed round that we've picked for this weapon would be more effective than either the carbine or pistol round now in use, and would have roughly half the power of either the M-1 round or the NATO round. It would have over four times the power of the present pistol round, and be at least twice as powerful with far greater stopping ability than any other pistol or submachinegun round in the world today.

Civilians are now using revolvers chambered for rounds of this amount of power, and are finding that the recoil isn't too much for accurate shooting.

The adoption of a weapons system such as this would fill a need on the front lines. It would serve the platoon leader, the machinegunner, and other specialized personnel who need plenty of personal firepower, but can't manage the bulk of a rifle and still do their jobs efficiently. Giving this weapons system to troops in rear areas would increase defensive depth and lessen the dangers caused by small groups of the enemy infiltrating through the lines.

The present .45 pistol is still a fine weapon, but it's possible to do much better today than we could in 1911. The proposed new weapon would improve on the pistol, the carbine and the submachinegun, which are not ideally suited for present roles in modern warfare.

Look Beyond Your Present Circle

By Capt Thomas D. Donegan

THE American Army officer of today, more than his predecessor, is bombarded by current events and opinions in an era of rapid change. Like the officer before him, he is flexible, adapting himself to new tools of his trade and the concepts needed to use them. In this fast-moving world, however, he bears added responsibilities.

Present world conditions require a fellowship of many nationalities, religions and customs. Standing beside the American officer in school, in garrison and in the field is a man who as short as twenty years ago lived in a land relatively as remote and strange as the moon. This fellowship demands a special maturity, knowledge and understanding—qualities that are vitally essential to leadership and cooperation among all officers of the free nations.

That the American officer was often deficient in these qualities in the past is affirmed by Gen Omar N. Bradley in his book, *A Soldier's Story*. Reflecting on World War II

CAPT THOMAS D. DONEGAN enlisted in the Army in 1940 and served at Fort Slocum and later at Fort Clayton, Canal Zone, prior to entering OCS at Fort Benning. After he received his commission he was a training officer at Camp Blanding until 1944, when he went to the European Theater as a platoon leader with the 324th Infantry Regiment, 44th Infantry Division. Captain Donegan left the service in 1946 to attend Clemson College, where he received a degree in English. He then attended Duke University, earning a master's degree in history. Returning to active duty in 1951, he became a company commander with the 3431 Army Service Unit at Fort Jackson and then went to Germany where he was assistant information officer at Headquarters, Seventh U.S. Army. Captain Donegan returned to the United States in 1955 for a three-year tour as a unit advisor with the U.S. Army Reserve at Lexington, Kentucky. In September of last year, he entered the Advanced Course at the Infantry School and has since received orders for an assignment in Korea.

military cooperation, he said, "Some officers of the American Army were peculiarly insular in their outlook, never having traveled abroad nor associated professionally with our prospective allies. As a consequence some of us were probably unduly sensitive to slights upon our Army and our national pride."

Today, our position is such that much of the free world looks to America for guidance and our military allies look to American armed forces for leadership. Overseas service during and since World War II has removed much of the insularity referred to by General Bradley, but the American officer still needs to look beyond the small circle of his unit, his job and his associates. It is not necessary that he become a political scientist to gain the knowledge and understanding essential to international leadership and cooperation. The mass media—the press, radio and TV—as a supplement to his personal contacts provide the means and opportunities of expanding his knowledge and understanding of other nations and peoples.

It should not be necessary to draw up a recommended reading list. The average officer is well aware of the many periodicals, newspapers and news magazines that are available to him as sources of contact with the world. It is only important that he take advantage of these sources by allotting a portion of his leisure time to reading and thinking about affairs outside his circle. It is also important that his sources be varied enough to reflect the many sides to all problems, so that he may more logically develop his own conclusions.

The responsible and educated officer enjoys encounter with new ideas, new facts and new events. He understands the economic, social, political and cultural environment of his neighbor. With this understanding he is better able to stand with other free men, effectively combating forces that threaten freedom, and planning the future with vision and purpose.

The opinions expressed in these articles do not necessarily reflect official thinking of the Infantry School.

YOUR INFANTRY CAREER continued from page 5

If you have studied a language in the past and are a bit rusty, brush up on it, and take the appropriate Army Language Proficiency Test. Arrangements for this can be made locally with your personnel officer. If you achieve a rating of "fair" or better in reading, writing and understanding, you will be considered proficient in the language. This extra qualification will fit you for additional and more varied assignments. Make sure your records reflect your degree of proficiency—it's important to you and your branch. See AR 611-6 and AR 350-24.

Photographs

Formal portraits of officers in the grade of colonel and above play an important part in many personnel actions. Army Regulation 640-140 requires that each colonel furnish the Department of the Army with a portrait-type photograph of himself. A new portrait, made with complete decorations, is required every three years. While the current regulation does not require a copy be furnished the officer's career branch it is highly desirable that pictures be available. Accordingly, all Infantry officers are encouraged to send their photograph to Infanty Branch. The photographs should be 8"x10" and sent to Infantry Branch, ORD, TAGO.

Gen Tucker Now Chief of Infantry Branch

Brig Gen R. H. Tucker has replaced Brig Gen Ben Harrell as Chief of Infantry Branch, Officers Assignment Division. General Harrel is now Assistant Division Commander of the 7th Infantry Division in Korea. General Tucker comes to the Branch from the 101st Airborne Division at Fort Campbell, Kentucky.

Army Enlisted Management Program

Department of the Army has announced an over-all personnel management program which is designed to enhance the prestige and improve the effectiveness of the enlisted man.

The new program, to be known as the Army Enlisted

Management Program, incorporates two years of Army developmental studies and the philosophy of recent military pay legislation. It is designed to provide more attractive career opportunities by: the introduction of a system to evaluate enlisted personnel against Army-wide standards; extra pay for greater proficiency; a system of centralized assignment for noncommissioned officers of the two top grades, similar to that of officers, and college training in scientific, technical and managerial areas at government expense.

Heart of the new management program is its Enlisted Evaluation System. This system, operated primarily through the Enlisted Evaluation Center at Fort Benjamin Harrison, Indiana, provides for a relative evaluation of the proficiency of each soldier based on written and performance tests, plus a job effectiveness report on the individual by his unit commander. The evaluation will insure the selection of the best qualified men and women Army-wide for promotion, proficiency pay and further career development.

One of the major applications of the Enlisted Evaluation System is the recently established Proficiency Pay Plan whereby extra pay is awarded to the most proficient enlisted men as reflected by their proficiency scores.

Recognition of the Army's enlisted personnel who carry heavy responsibilities has been provided by the addition of two new pay grades to the top of the enlisted pay structure. Promotion to these grades as well as to other enlisted grades will be related to the enlisted evaluation system. The Army plans to advance at least 14,500 to the top grades (E8 and E9) during the next four years.

For those noncommissioned officers who make the Army a career, permanent promotions are now being made for the first time since the outbreak of the Korean War. Permanent grades are given only to individuals who have proved themselves on the job in the temporary grade, thus giving the qualified professional soldier added recognition and a permanent status.

Another aim of the Army Enlisted Management Program is to aid in the development of promising enlisted men by further training and education. Upon entering the Army, the volunteer, beginning in January, 1959, will have the opportunity of enlisting for a particular occupation of his choosing in which he can show sufficient aptitude. In addition to the many service schools available, career-motivated soldiers may now also apply for college-level training in technical, scientific and managerial areas at government expense. Since March, 1958, when this opportunity was announced, the Army has received 1290 applications for college training from enlisted men, 127 of whom are now in school or awaiting admission to 27 accredited colleges. It is expected that approximately 1200 soldiers will be admitted to college during the next four years under this program.

To insure timely use of the skills and enhance the prestige of top noncommissioned officers, the Army will centralize the assignment of the top grades, E8 and E9, in a method somewhat similar to that currently in effect for officers. Permanent changes of station of those noncommissioned officers will be controlled by the Department of the Army.

Part of the new noncommissioned officer career plan is a change in the Army's previous policy that certain enlisted men with 20 years service could remain indefinitely in the United States. The new policy, based on operational necessity, provides that soldiers will henceforth be subject to overseas assignment until their 27th year of service. Those already stabilized will retain this prerogative, but special provision is made to insure the availability of E8 and E9 personnel for overseas assignment.

The Army will also introduce a modification for temporary enlisted promotions based upon the use of a composite score, a Promotion Qualification Score, as a screening device. The plan will provide an Army-wide system for enlisted men and women to prepare themselves for promotion on an individual basis. Another innovation is a plan for making 20 percent of all temporary promotions to E8 and E9 from among outstanding men and women who have between eight and 15 years of service. This plan will give aggressive young noncommissioned officers a chance to get ahead faster, as well as recognizing the value of experience for the majority of promotions.

The Army will continue its program of separating from the service those soldiers who are unable to handle the complex jobs of today's Army. During the past year, the Army has given early discharges to 70,000 men. The discharge of ineffective men from Army rolls has already resulted in an over-all improvement in the level of training, job performance and behavior, and has caused a major upward trend in voluntary participation in elementary educational courses.

The Army publication outlining the Army Enlisted Management Program (DA Circular 600–15) has been distributed Army-wide. It covers the Enlisted Evaluation System, proficiency pay, Promotion Qualification Score, promotion to E8 and E9, permanent enlisted promotions and name assignments for E8 and E9, as well as stabilization of upper-grade enlisted personnel, Job Performance Potential Program, pre-induction aptitude screening, occupational area enlistment option, educational development and the Army Green uniform.

DA Circular 621–25, recently distributed, announces the details of "Voluntary Off-Duty Education at Civilian Schools and Colleges." It authorizes partial tuition assistance for Army personnel of up to 75 percent, not to exceed $7.50 per semester hour, $5.00 per quarter hour, or $22.50 per H.S. Carnegie Unit, and states that applications for assistance will be made on DA Form 2171–R.

Hannigan Learned the Hard Way

We must be ready to meet the man who is everywhere yet nowhere, who can play havoc with isolated troops on the dispersed battlefield—the guerrilla.

By Capt Morris H. Jenkins

IT WAS a stormy Sunday night, and a cold, gusty wind swept sheets of rain against the windshield of the tracked cargo carrier. Sp5 Hannigan could feel the force of the wind against the sides of his vehicle. The nearest of the six carriers in front of him was hardly visible.

"Hell," Hannigan said to himself, "in half an hour I'll be relaxing with a cup of hot coffee while someone else is lugging off my load of ammo and medical supplies." He lit a cigarette.

An occasional flash of lightning cut across the sky, silhouetting pine-covered peaks. One of the flashes was mirrored in a steep-sided mountain lake. "Be glad to get out of this slop," he thought, looking again at his watch. The supply point toward which the small convoy was moving was one of several in the area, all highly dispersed, all accessible only

CAPT. MORRIS H. JENKINS began his military career when he enlisted in the Army in 1945. After seven years of enlisted service he received a direct appointment as a second lieutenant. He then became a platoon leader with the 504th Airborne Infantry Regiment, 82d Airborne Division and served with that organization until late 1952 when he joined the 10th Special Forces as a team leader. Captain Jenkins was with the 10th Special Forces for four years, serving at Fort Bragg and later at Bad Tolz, Germany. In 1956 he was assigned to the Infantry School as an instructor with the Basic Airborne Committee of the Airborne-Air Mobility Department. Captain Jenkins entered the Advanced Course at the Infantry School last September and, upon graduation in February, he is scheduled to go to Korea.

by air or by tracked vehicles. This was nuclear war in rough country.

Hannigan drew at his cigarette. He coughed the smoke out in surprise. An explosion too loud for thunder and too bright for lightning had called his wandering thoughts sharply back to the situation at hand. Instinctively he came to a halt and reached in the dark for the pistol grip of the machinegun.

Oddly enough, he hardly heard the second explosion. But he was lifted bodily and propelled through the carrier door and into a ditch. For a fraction of a second before he lost consciousness, he felt the heat of the blast on his back.

It was fortunate for Hannigan that he passed out. Small groups of shadowy figures emerged from the thickets, hip-firing their automatic weapons and swarming over the carriers. They believed Hannigan to be dead.

Quickly, quietly, without apparent supervision, the figures moved back and forth from the vehicles to the wood's edge. Then, as quickly as they had come, they were gone.

When Hannigan came to, the rain had stopped. There was a distinct smell of scorched metal in the air. Embers glowed in the ruins of the convoy and at one end there was still a small fire of some sort. Hannigan broke the oppressive silence to talk to himself again. "Well, whadda you know—guerrillas," he said softly. "After our supplies. And no warning—except maybe that knocked-out bridge back on the main road. I wonder how they knew. I wonder. . ."

It's probable that Hannigan will never get the answers to all his questions—in fact, he'll be lucky if he gets the answers to a few of them. The guerrilla band that hit the column probably was formed in that vicinity only a short time before. It might just as well have sprung from the earth. Guerrillas are a clandestine force. They operate with complete informality, taking quick advantage of any opportunity. It is difficult if not impossible to predict the time, place and pattern of their operations.

The guerrilla leader is a clever and intelligent man. He plans. He shrewdly makes use of every advantage available to him. He has intimate knowledge of the countryside. He knows every likely hiding place. And he knows where to strike and how to disappear afterwards. The choice of both terrain and time of attack are his, and the element of surprise works for him. He knows that fifty or so guerrillas in his "army" can accomplish the work of a company or even of a regiment or battle group.

The guerrilla leader who hit Hannigan's column had observed the area and the supply convoys moving through it. Perhaps he learned from a network of informers, or perhaps from careless conversation among our troops, what supplies the convoys were carrying. It could be that he obtained the information by monitoring our communications.

Learning that the vehicles carried items he needed, the guerrilla leader timed our movements carefully and found that we were operating on a fairly fixed pattern and schedule. He decided to ambush one of the convoys. To insure that we would use a route through the mountains which was most suitable to his purpose, he destroyed a bridge on the main route. He did so as unobstrusively as possible so that the incident would appear isolated and would give no warning of his intentions.

When he was ready to attack, the guerrilla chief moved his entire band to an area several miles from the ambush site. From there he dispatched observers to keep a watch on the main depot from which the supplies would move. The evening before the strike, he conducted a rehearsal at the ambush site under cover of darkness. After the rehearsal, the guerrillas retired a short distance and made last-minute improvements in their plan of attack. Every man knew his job and every man carefully memorized the routes of approach and withdrawal, the signals for opening and ceasing fire, and the "bug-out" signal in case anything went wrong. The leader, while planning to *use* surprise, was also prepared *for* surprise. He personally saw to it that the route of withdrawal was protected by special security guards. The die was just about cast.

Promptly at nine-thirty on Sunday night the guerrilla band moved into position. The chief himself supervised the laying of demolition charges in the pass to seal the column in. A driving rain had already set in, turning mountain streams into torrents and soaking him to the skin. But when the leader glanced skyward there was satisfaction in his face. He had learned that foul weather can be a powerful ally, masking his movements and decreasing our alertness and ability to fight. Remaining hidden, the guerrillas waited.

As it had done on previous eve-

nings, our convoy moved out of the supply depot at approximately ten o'clock. After leaving the highway, it followed the only available route, and the signal that our carriers were moving was passed along the guerrilla communication net to the chief. Tense with excitement and anticipation, he was determined that the ambush would be successful. And successful it was.

Unfortunately, our troops gave unwitting cooperation to the guerrilla force. As a result of our general apathy toward unconventional warfare, they had received little training in antiguerrilla fighting. They committed grave mistakes. They fell into the trap of a fixed pattern. Not only did they discount the effectiveness of clandestine enemy attack, but on this particular night they did not even regard it as a possibility. They believed that bad weather would keep hostile forces inactive. They were unable to "think" guerrilla warfare, and consequently they failed to take even the simplest precautions against it.

Guerrilla activities can be expected to be more frequent and more costly in future combat than they have been in the past. When our troops are committed to battle in nuclear warfare, they will be widely dispersed—laterally and in depth—for protection against atomic and other high-yield weapons. But this dispersion will set them up for the guerrilla. Units operating independently or semi-independently of other forces will be particularly vulnerable, and unless we are prepared to cope with them such attacks could be disastrous.

The Infantryman is accustomed to measuring combat strength in terms of battle groups or divisions. Because the guerrilla generally operates in relatively small bands, the Infantryman is tempted to write him off casually. But the guerrilla is able to harrass, terrorize and demoralize large forces. His small groups accomplish missions which might require whole enemy divisions operating in a more orthodox manner.

The guerrilla is a master of three special types of military operations—the raid, the ambush and the limited attack. Each of these operations requires a small, highly mobile, lightly armed, tightly organized force. However "civilian" he may be in principle, the guerrilla can be quite "military" in practice. And it is wise to remember that many guerrillas have had prior military experience. They know how to use terrain as an aid in attaining their objectives. They have learned to combine short rations with a rigorous existence. Necessity, a most effective teacher, compels them to work together in a manner which regular forces would find difficult to match. And since guerrillas usually are lightly armed, and equipped for a particular mission, they do not require the variety of technical information demanded of the regular Infantryman. A working knowledge of their basic weapons is sufficient. Moreover, they are not slowed down by the bulk and weight of unnecessary weapons and equipment.

Given the choice of time and terrain, the guerrilla can sometimes outclass the professional soldier at his own game. To underestimate the guerrilla is simply to add to his advantage. Moreover, it is wise to assume that experienced, successful and established guerrilla forces are receiving some type of support from regular forces. The enemy is just as willing as we are to provide instructors, weapons, ammunition and food to guerrilla bands which have demonstrated their ability to fight. The enemy is just as willing, in fact, to organize guerrilla bands where nothing exists but the potential. In dealing with guerrillas, therefore, we sometimes are not dealing with a "civilian" force at all. We may be dealing directly with the professional enemy soldier himself, or his equivalent.

It is obvious that the modern Infantryman must be prepared to counter guerrilla activity, both offensively and defensively. We must be prepared to defend ourselves against the guerrilla at any time and place. We must be ready to fight him not just in the rear areas where guerrillas customarily operated during World War II, but in forward battle areas as well, where we can expect increasing amounts of guerrilla activity. It is, after all, the guerrilla who dictates the circumstances of the meeting.

In addition, the Infantryman must be capable of offensive action against the guerrilla. We must, in other words, be able to dictate some of these meetings ourselves. We must know when, where and how to destroy guerrilla efforts. This ability cannot be improvised in the battle area itself—it requires thorough planning and effective training *before* we enter combat. We must learn to think and act like the guerrilla before we can fight and conquer him on his own ground. And the unit or individual that is well-trained in the concepts of guerrilla fighting will be better prepared for any phase of nuclear warfare.

Unfortunately, effective antiguerrilla warfare training is an uncommon today as it is necessary. While we are providing instruction and training in the employment of *friendly* guerrilla forces, we are doing very little about the techniques of combating enemy guerrillas.

The United States Army Special Warfare School at Fort Bragg offers a one-week orientation course on the organization of Special Forces which includes some of the methods used by guerrillas. But this course is not intended as detailed preparation for antiguerrilla operations.

Beyond the training provided by this specific school, basic (ILOC) and Advanced Officer courses at the United States Army Infantry School include a short orientation in the role of Special Forces, but this instruction is primarily concerned with the organization, training and supply of friendly guerrilla forces. Both courses briefly mention antiguerrilla measures, but only in connection with

instruction on the defense of rear areas. Students attending the Ranger course receive some partisan play in their patrol problems, but here again the emphasis is placed upon contacting and utilizing friendly guerrillas. All basic trainees, of course, receive four hours of orientation and demonstration on guerrilla and antiguerrilla warfare. But they receive little if any practical work in this field.

It is apparent that the Infantryman needs more training in guerrilla and antiguerrilla warfare. A guerrilla warfare school for selected officers and noncommissioned officers is the logical answer to this need. Instruction should include not only supply, administration and training of friendly guerrillas, but tactics and countertactics, antiguerrilla security, and other topics of use in combating enemy Special Forces. In a few weeks, students of such a course could learn and perform the basic techniques of countering unconventional warfare. They, in turn, could prepare and supervise guerrilla and antiguerrilla warfare instruction for their home units. Much of this training could be worked into platoon- and company-level field training exercises. In addition, special instructional teams could be provided for major combat units. In any event, the importance of guerrilla warfare certainly warrants more attention in our service schools.

Specialist Hannigan and the other members of the convoy were not prepared for what happened to them that rainy Sunday night. They were up against a different kind of fighter —a fighter who is as clever as man, as deadly as any wild creature—the guerrilla. Unless we are willing to risk a similar fate, we must learn to fight him.

Significance is added to this subject by the possibility that future Infantry operations may at times resemble guerrilla-type operations and that guerrilla-type forces may utilize small, low-yield nuclear weapons.—Editor.

LETTERS *(continued from page 3)*

picture. . . . He characterized them as looking soft and lacking the "fire" expected of combat soldiers.

It occurs to me, also, that in making a picture like this, every effort would be made to capture the determination, aggressiveness and fire that you would find on a combat poster. I've seen many good Infantry School pictures but this one seems a little flat. While mechanization is here to stay, we keep insisting, and rightly so, that the soldier is the key to victory—let's portray him in such a manner that we convince people it's true. . . .

D. G. GILBERT
Col, Infantry
Fairfax, Va.

Empty Holsters

Sir:

Very early in the Korean War I recall seeing a photo of a young soldier . . . test-firing a bazooka prior to going into combat, according to the caption. The last sentence of the caption asked, "But where is his pistol?" He was wearing a holster but it did not contain a pistol. Since that time I have noticed so many Infantrymen, enlisted and officer, who are guilty of this same omission. . . . In your fine issue of Oct-Dec 1958 I was distressed to see the "empty holster," not only on page 10 but on the cover itself. . . . Couldn't we start a "fill the holster" movement?

Many years ago . . . I initiated a request for a permanent binder for the old *Quarterly*. I hope you will soon see fit to make available to us a binder to keep and protect our *Infantry*.

Keep up your outstanding work.

EDMUND T. NEGRELLI
Maj, Infantry
Connecticut National Guard

Personnel at the United States Army Infantry School do carry pistols in their holsters. However, the detail furnished for the M56 photos apparently showed up without them, and no one picked this up, including members of the Infantry *staff. Be assured that we shall be holster conscious in the future.*

The Book Department of the United States Army Infantry School plans to procure a binder for the enlarged magazine which will be similar to the one provided for the smaller magazine. We shall notify all readers when the new binder is available for purchase.—Editor.

All Subscribers

Sir:

. . . I am happy to inform you that all of my Infantry units have subscribed to *Infantry* magazine and nearly 100 percent of Infantry officers of my command are now subscribers. . . .

M. C. TAYLOR
Col, Infantry
2d Infantry Brigade
Fort Devens, Mass.

Double Time

Sir:

Recently my company commander and the rest of the company officers

. . . were wondering what commands can be given at double time. The new FM 22–5, Drill and Ceremonies, specifies only "Halt" and "Quick Time." I say that "Column Right" or "Column Left" may also be given. Can a flanking movement and a rear march be given as well? The manual is vague on this. My argument is that double time is no less a precision march than quick time. Only the cadence has been increased, but the dress and interval remain the same.

The new *Infantry* . . . has greatly helped all of us here in Germany to better prepare ourselves for our mission with the NATO forces. Our best wishes to the new *Infantry* and keep up the good work!

LAWRENCE C. BRUSCAS
1st Lt, Infantry
APO 36, New York

We assume that you refer to FM 22-5, dated August 1958. In paragraph 17(c), this manual directs that any marching movement may be executed at double time unless otherwise stated. One reference, paragraph 29(a), specifically states otherwise. It advises that "Rear, March" may be given only at quick time. Paragraph 70 indicates that flanking commands also are given at quick time. However, in view of paragraph 17(c), this would not preclude giving flanking commands at double time. The Infantry School feels, however, that such movements given at double time would lack order, smartness and precision, and therefore advises against this. Paragraph 102(b) provides an example of column movements given at double time.—Editor.

Terrain Pictures Wanted

Sir:

During the past few months this instructor unit has been making VU-Graphs from the "How Would You Do It?" articles in *Armor* magazine for instructional use in the ROTC program. We have found them very helpful in teaching Armor tactics.

It is felt that your articles could be used in the same manner if they contained more terrain pictures in the development of tactical exercises. . . .

DOYLE D. SMITH
1st Lt, Infantry
Midwestern University, Texas

Your suggestion has merit, particularly for ROTC students. However, we have found that the sketch type of illustration is not sufficiently accurate for readers to solve our tactical problems. Consequently, we have been using simplified map-type illustrations which permit the use of a scale.—Editor.

Sky Diving

Sir:

Congratulations on your new look. I am pleased to find that your taste and style in material have not changed. I especially refer to your article by Capt Jacques Istel, USMCR, on Sky Diving—old format—and your article by Lt Fritz Bernshausen, USA, on the new jump techniques—new format ("Stabilized Free Fall," Jan 1958 *Infantry*; "Old Jumpers—New Technique," July-September 1958 *Infantry*).

About one year after my release from active duty with the U.S. Marines, with the experience I picked up at the Airborne and Jumpmaster Courses at Fort Benning (in which Lieutenant Bernshausen was one of my instructors), with the advice of Captain Istel and with the help of many good books, I founded the Midwest Sky Diving Club. Many of our members are officers and men of the 302d Special Forces Reserve—the only Airborne reserve in the Midwest.

I am at your readers' disposal in regards to any information that they may desire about our club, other clubs in the United States or Sky Diving in general. No prior experience is necessary for this sport, for most clubs have a training program such as ours.

We have begun a collection of foreign jump-wings and if anyone comes across a good example he is willing to part with, we would be honored to include it in our collection. Also, any literature about parachuting in general and Sky Diving in particular is always welcome.

Keep up the fine work and you will remain what you are now, a stimulus for Infantrymen the world over.

FRANK F. OWSIANKA
Pres., Midwest Sky Diving Club
1116 Washington Blvd.
Oak Park, Ill.

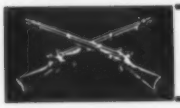
Continued from Page 20

CONFEREES

Maj Russell C. Peeples, Jr.
Maj Donald V. Rattan
Maj Clifford H. Reynolds
Maj James E. Wirrick
Capt Fred K. Cleary
Capt John Dunlop
Capt Sarah F. Niblack
Dr. Preston S. Abbott
Mr. Maynard R. Ashworth
Mr. Hanson Baldwin
Mr. Monte Bourjaily
Dr. F. H. Carten
Mr. Erle Cocke, Jr.
Dr. Meredith P. Crawford
Mr. D. Z. Henkin
Dr. Douglas H. K. Lee
Mr. Jean L. Lewis
Mr. Leonard Plotkin
Mr. Edge Reid
Mr. W. C. Tucker
Dr. V. O. Wodicka
Mr. William H. Zimmerman

USAIS & USAIC CONFEREES

Maj Gen Paul L. Freeman, Jr.
Brig Gen Stanley R. Larsen
Brig Gen John F. Ruggles
Col Francis X. Bradley
Col Robert S. Cain
Col Paul T. Clifford
Col John T. Corley
Col Robert L. Crouch
Col William E. Ekman
Col Norman B. Edwards
Col Edgar L. Grider
Col Adrian L. Hoebeke
Col Harry E. Hornecker
Col Charles T. Horner, Jr.
Col Frank M. Izenour
Col Paul J. Jarrett
Col Lewis W. Leeney
Col Julian H. Martin
Col Samuel T. McDowell
Col Horace F. McFeely
Col George A. McGee, Jr.
Col Robert S. Moore
Col John F. T. Murray
Col Roy A. Murray
Col George D. Patterson
Col John J. Pavick
Col Lloyd B. Ramsey
Col Robert B. Skinner
Col Braxton E. Small
Col Albert C. Wildman
Col John M. Woestenburg
Col Robert H. York
Lt Col Thaddeus W. Drobek
Lt Col Richard W. Healy
Lt Col John W. Marr
Lt Col James F. Nabors
Lt Col William E. Neidner
Lt Col Stephen H. White
Lt Col William H. Witt
Maj John W. Collins
Maj William B. Fowlkes
Maj Euless B. Moore, Jr.
Maj Robert B. Nett
Maj William A. Van Dyke
Maj Frank J. Walton
Dr. Harold S. Tate



ANSWERS TO QUARTERLY QUIZ *(See page 30)*

Possible score 100 points, expert 90-100, sharpshooter 70-80, marksman 50-60, recruit 30-40 and bolo 0-20. For detailed discussion of the answers checks the references listed.

1. **c.** When multiple approaches are available and objectives are shallow, a linear formation (three or more companies in the attack) maximizes the frontal firepower and allows the majority of the battle group to close rapidly with the enemy. (Chap 2, Sec III, pars 53 and 54e(3), Advance Sheet, Infantry Division Battle Group, USAIS, July 1958).

2. **Yes.** In a mechanized attack an assault line is selected even though mounted movement onto the objective is planned. In such a case, the assault line selected should be suitable for use by dismounted troops in the event early dismounting is forced by enemy action. (Chap 2, Sec IX, par 58b(6), Advance Sheet, Rifle Company, Infantry Division Battle Group, USAIS, May 1958).

3. The ¾-ton truck and trailer from platoon headquarters receives its load from the battle group supply point. This vehicle is under the supervision of the assistant platoon sergeant, and remains in a centralized, covered location while one ¼-ton truck and trailer from platoon headquarters and the ¼-ton truck and trailer from each section receive ammunition to resupply the guns. (Chap 5, Sec I, par 131, FM 7-21, August 1957).

4. **c.** The battle group commander usually prescribes the general location, control and composition of the combat outpost. Normally, the responsibility for establishing the combat outpost and the authority to control it are delegated to the forward companies. Troops to garrison the combat outpost are normally furnished by the forward company, though reinforcements such as tanks and Infantry carriers are frequently attached to the company for use on the combat outpost. (Chap 3, Sec II, par 87b, Advance Sheet, Rifle Company, Infantry Division Battle Group, USAIS, May 1958).

5. **a.** The probable line of deployment is the location on the ground where the company commander plans to complete final deployment prior to moving out with squads as skirmishers. This line should coincide with visible terrain features to facilitate its identification at night. It should be generally perpendicular to the direction of the attack and should be as close to enemy positions on the objective as it is estimated the company can move without being detected. When the enemy has wire obstacles in front of his position, the probable line of deployment should be on the enemy side of the obstacle if feasible. If the battle group commander does not designate the probable line of deployment, the company commander selects it. (Chap 2, Sec XI, par 72f, Advance Sheet, Rifle Company, Infantry Division Battle Group, USAIS, May 1958).

6. After receiving the mission you will make a *tentative plan,* mentally outlining the actions to be taken so that you may best utilize the time available for preparations and planning prior to rehearsals and departure. You will then *select the additional members of the patrol.* The men will be chosen with care; no one with colds or other physical ailments should be allowed to go on the patrol. You will then issue a *warning order* to all members of the patrol. The warning order will include the situation, mission, equipment and a complete chain of command. While a designated person *supervises* the preparation of patrol members, *you and your second-in-command will make a reconnaissance* from a friendly OP or by light aircraft if the latter is available. Upon completion of the reconnaissance, which should permit a tentative selection of routes and rallying points, you will complete your *detailed planning,* integrating what facts you have learned with those given you by the commander at his briefing. After your detailed planning is complete and arrangements are made to pass through and return to friendly lines, you will issue *the patrol order.* The patrol order should include the situation, mission, the general plan, specific duties of individual patrol members and coordinating instructions, such as time out and in, routes and alternate routes, passage of friendly units, action at danger areas, action to be taken upon enemy contact, initial rallying points, action at rallying points, action at the objective and reporting after the patrol. The order should also point out the arms and ammunition to be carried, how the wounded will be handled, signals, communication and challenges which will be used, the chain of command and the position of the patrol leader in the formation. In giving the patrol order, you should include a briefing with a map and a sandtable or a replica of the objective area fashioned from dirt and other natural materials. Your next step will be to conduct a *rehearsal* of the patrol. The rehearsal should be conducted on terrain as similar to the objective area as possible and it should be used to check control, security en route and at the objective, actions to be taken in case of unexpected contact, and actions on the objective and during withdrawal. Following the rehearsal you will conduct a final check of equipment to ensure that everything is ready and complete to the minutest detail. Then the patrol should be allowed to relax until the specified time to move out.

The italicized words and phrases contain the principal points to be considered in patrol preparation.

(Chap 10, Sec II, pars 131 through 140; Sec III, par 140; Sec IV, pars 141 through 147, FM 21–75, June 1957).

7. **b.** During defensive operations, the battle group relies upon wire as one of its primary means of communication. Two or more lines are laid over different routes from the battle group command post to the subordinate units. (Chap 2, Sec III, par 7–21, August 1957).

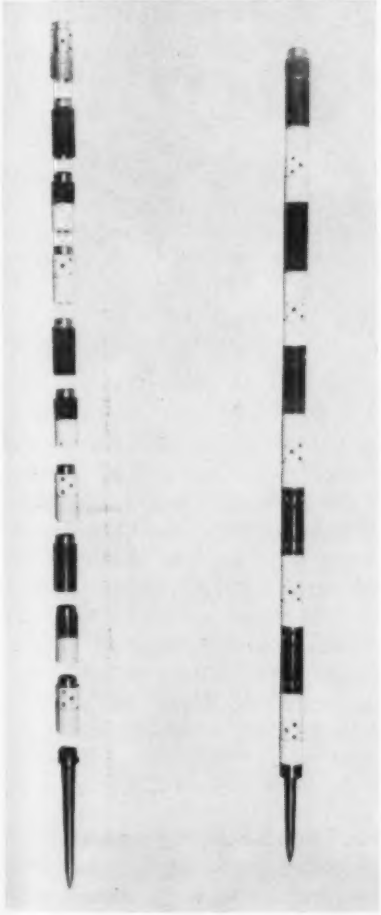
8. **d.** If no battery supply is available or if the transmitter element is defective, emergency operation of Telephone Set TA-312/PT is possible over reduced distances (approximately four miles) by using the receiver element as a sound-powered transmitter. This is done by speaking directly into the receiver element, then listening while the distant party is transmitting. (Chap 2, Sec III, par 22, TM 11–2155, December 1957.)

9. Realistic "shooting" with the portable flamethrower for aiming and firing exercises may be achieved by the use of water instead of fuel. The Special Purpose Weapons Committee of the Weapons Department, USAIS, has found that water gives the same effect or feel in the portable flamethrower as unthickened fuel. Instructors should ensure that flamethrowers are wiped dry after "firing" with water.

10. The M15 rifle differs from the M14 in that it has a bipod, a heavier barrel and handguard, a hinged buttplate and a selector for full automatic fire. ("Firepower," Pentomic Infantry Division, July 1957 *Infantry*; "New Basic Weapon for the Infantry," January 1958 *Infantry* and Special Text 7–179, "U.S. Rifle, 7.62mm, M14 and M15," November 1958).

Continued from Page 60.

Why Don't We . . .



Expedient aiming stake. Left: extensions and spike; right: assembled stake.

. . . manufacture a threaded spike for a field-expedient aiming stake? Thirty-five cartridge-container extensions from 4.2 mortar rounds and the spike, when assembled, will make a standard-size stake. The stake can be painted red and white or left unpainted, since the aluminum alloy extensions are naturally reflective and will not rust.

This type stake in some ways is superior to the issued equipment. The height can be adjusted merely by adding or removing the desired number of extensions; it can be pounded into frozen or packed soil (if the top extension is damaged it can be easily replaced); the stake is rugged enough to withstand rough handling; and replacement parts are readily available at the nearest 4.2 outfit.

The spike should be machined from either one-inch, cold-rolled steel rod stock or similar material. It must have a left-hand thread guaged to fit the female end of the cartridge container extension. The spike is simple to produce. If not provided as an issue item it could be turned out by division ordnance.

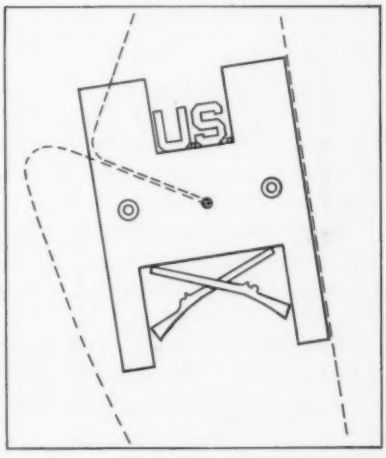
Capt Robert E. Copeland

. . . use a simple template to align lapel insignia? Getting each item in the proper place is a tedious and time-consuming task. Even with care proper placement is not always achieved. This, of course, detracts from the otherwise smart appearance of the uniform.

A plastic, metal or even cardboard template can be made quite easily at home or in a craft shop. The "H" shaped device has a small hole in the center of the crossbar of the "H." The top and bottom edges of the crossbars are exactly ⅝-inch from the hole. To use the template, place it on the lapel so that the center hole is directly over the apex of the lapel slot and the edge is parallel to the lapel fold. The insignia is then centered in the appropriate notch as shown in the sketch. Two pushpins cemented to the template will hold the device in place while the insignia is being positioned.

Capt Wray E. Bradley

Insignia Template



WHAT'S NEW FOR INFANTRYMEN

Changes • New Developments • Items of Specific or General Interest to Infantrymen

SS10 Antitank Guided Missile Platoon

A pilot SS10 Antitank Guided Missile Platoon is being troop tested at Fort Benning.[1]

The test platoon, organized from elements of the 2d Battle Group, 14th Infantry, began training in November, 1958. In February, the platoon will participate in field exercises to determine the adequacy of the SS10 instructional program.

To facilitate the training of SS10 gunners, the United States Army Infantry School has received two training devices, a Simulator and a Cinetir.

The Simulator is an electronic device which represents the SS10 tail flare by means of a moving spot on a cathode ray oscilloscope (similar to a TV picture tube). The movement of the spot is controlled by the same type of remote control unit and signal generator used with the actual missile. The Simulator is employed in the basic stages of gunnery training to teach the gunner the fundamentals of guiding the missile in flight.

The Cinetir is used for advanced gunnery training. This electronic aid portrays realistic combat situations for student gunners by means of a wide-screen motion picture. A luminous spot, representing the tail flare, is projected on the screen. The position of the spot is controlled by the standard remote unit. The student is required to "fly" the spot to a moving target. The Cinetir can also show the effects of varying atmospheric conditions on the missile's flight.

Vehicle Navigation Course

A one-hour period of instruction on vehicle navigation has been integrated into the program of instruction for Advanced, Associate Advanced, Motor Transportation and Automotive Supervision classes at the United States Army Infantry School.

The period is designed to acquaint the student with the requirement for a system of vehicle navigation for the mobile Infantry and to arouse his interest in this subject.

The student is given an orientation on navigational equipment currently under development, including the subminiature gyro compass and the position indicating computer.[2] These two instruments comprise an automatic dead-reckoning navigational system which will provide the vehicle commander or operator with constant data on his position and course.

Protective Mask

The new E13 protective mask has been tested at Fort Benning under simulated combat conditions.[3] The mask uses lightweight filter pads inclosed in cavities molded into the facepiece. The protruding cannister has been eliminated entirely.

The E13 offers superior vision and lower breathing resistance. Its "voice-mitter" amplifies the wearer's voice so that masking will not interfere with communication between soldiers.

Fort Benning's Infantry Human Research Unit conducted the six-day test to determine the effect of the mask on individual combat performance. Troops were tested in the use of the rifle, binocular target detection, terrain speed traps and physical endurance runs with and without the mask. Any loss of performance due to masking was noted. Results of the test are not yet available.

Tubeless Tires

A user evaluation test of tubeless tires for jeeps is being conducted at the United States Army Infantry Center to determine whether these tires are suitable for Infantry vehicles. The test is being made by the 1st Battle Group, 29th Infantry, and the Transportation Motor Pool, in conjunction with the Ordnance Tank-Automotive Command.

Except for the tubeless feature, the tires are identical in dimension and construction with the standard 7.00-16 military tire. The only other tubeless tires currently used by the Army are those installed on new sedans by the manufacturer.

Poncho Parachute

A new use has been found for the Army poncho. The poncho, shower-shedder for troops all over the world, can also be used as an improvised supply parachute.

[1]See "Death to the Tank" in the July-September 1958 *Infantry*.

[2]See "Vehicle Navigation" in the July-September 1958 *Infantry*.

[3]For information about an earlier model of the E13, see "What's New for Infantrymen," p. 107, October 1957 *Infantry*.

The practicality of this field expedient was demonstrated recently in a test drop made in the Panamanian jungle by personnel of the Jungle Warfare Training Center and the Army Aviation Section, 1st Battle Group, 20th Infantry.

Practice and demonstration drops utilizing poncho parachutes are now carried out as a normal part of the training cycle at the JWTC.

By using the poncho, the Center avoids the expense of employing the regular cargo parachute. Use of cargo parachutes is restricted to items too heavy to be sustained by the poncho.

Mortar Locator Radar

The MPQ–4A Mortar Locator Radar developed for the Signal Corps has undergone producer's tests. Highly mobile, the trailer-mounted radar system detects an incoming mortar shell in flight and electronically computes the location of the enemy mortar which delivered it.

The capability of rapidly searching out the sources of mortar and high-angle, low-velocity artillery fire permits a quick and effective defense against one of the Infantryman's most formidable adversaries. In addition to being able to locate rapidly sources of enemy mortar fire and high-angle, low-velocity artillery, the MPQ–4A can also be used to locate points of impact for the direction of counterfire.

Revised Pre-Commission Course

A revamped Pre-Commission Extension Course, oriented to pentomic organization, is now available to enlisted personnel throughout the Army. The course is administered by the Department of Non-Resident Instruction of the United States Army Infantry School.

The specific purpose of the course is to cover those basic subjects which are common to all branches of the Army and which may be required for appointment to the grade of second lieutenant in one of the Reserve components. However, all enlisted men may use the program to improve themselves professionally and to further qualify themselves for advancement.

While the revised Pre-Commission Extension Course is not specifically designed to be used as a vehicle for promotion within the enlisted grades, completion of the course will improve the military education of the individual and thus equip him academically for promotion and acceptance of added responsibility.

Information on the Pre-Commission Extension Course and other Army Extension Courses is contained in AR 350-60 and DA Pamphlet 350–60.

New Extension Course Brochure

Copies of a new brochure describing the 1958-1959 Extension Course Program of the United States Army Infantry School have been distributed to all army and corps headquarters, military districts, service schools and state adjutants general throughout the United States and in overseas commands. The brochure lists by number and title the subcourses prepared and administered by the Infantry School, and also contains information on content, eligibility for enrollment and enrollment procedures.

Entitled "Extension Course Program 1958-59," the brochure is available at active Army, Reserve and National Guard headquarters and installations. It can also be obtained by writing to the Department of Non-Resident Instruction, United States Army Infantry School, Fort Benning, Georgia.

The Extension Course Program parallels the instruction presented to resident students at the Infantry School, but is designed to meet the needs of correspondent students. More than 52,000 students are currently enrolled in USAIS Extension Courses.

The MPQ-4A Mortar Locator Radar.

MANUALS

The following manuals and training literature are being written or rewritten. Publication cannot be expected until later this year.

FM 7–21, C1, Headquarters and Headquarters Company, Infantry Division Battle Group (change).

FM 21–5, Military Training (revision).

FM 21–75, C1, Combat Training of the Individual Soldier and Patrolling (change).

FM 23–30, Grenades and Pyrotechnics (revision).

FM 23–( ), Machinegun, 7.62mm, M60 (new).

FM 23–( ), 90 mm Gun, Self-Propelled, M56 (new).

TC (s) ( ) – ( ), The Antitank Guided Missle (SS–10) Platoon (Organization and Operational Concept) (Part One) (U) (new).

TM 57–210, Air Movement of Troops and Equipment (revision).

The following manuals have been forwarded by the United States Continental Army Command to The Adjutant General for printing and publication:

DA Pamphlet 23–2, Hits Count (revision).

FM 21–( ), Evasion and Escape (new).

(C) FM 21–( )A, Evasion and Escape (new).

FM 22–5, Drill and Ceremonies (revision).

FM 22–100, Military Leadership (new).

FM 23–5, U.S. Rifle Caliber .30, M1 (revision).

FM 23–90, 81mm Mortar, M29 (revision).

ROTCM 145–4–2, The Junior ROTC Manual (revision).

ROTCM 145–100, Service Orientation (revision).

TM 57–220, Technical Training of Parachutists (revision).

The following manual has been forwarded to Department of the Army for approval and publication.

FM 7–40, Infantry Division Battle Group (new).

The following manual has been forwarded to United States Continental Army Command for review and approval:

FM 7–10, Rifle Company, Infantry and Airborne Division Battle Group.

The following manuals have been published by Department of the Army and are available to instructors through normal supply channels:

FM 21–18, Foot Marches (revision).

FM 21–150, Hand-to-Hand Combat (change).

FM 23–32, 3.5-inch Rocket Launcher (revision).

FM 23–72, Carbine Marksmanship Courses, Trainfire I, (new).

FM 23–82, 106mm Rifle, M40A1 (revision).

FM 57–35, Army Transport Aviation—Combat Operations (new).

ROTCM 145–30, Individual Weapons and Marksmanship (revision).

ROTCM 145–41, Crew Served Weapons and Gunnery (revision).

ROTCM 145–60, Small Unit Tactics Including Communication (revision).

ROTCM 145–80, Logistics (revision).

ROTCM 145–90, Operations (revision).

TM 57–220, C3, Technical Training of Parachutists (change).

TRAINING FILMS

The following training films have been approved for release to requesting units:

GF 10–44, Warehousing Series—Part IV—Palletized Unit Loads, 17 min.

GF 10–45 Warehousing Series—Part V—Receiving and Shipping of Supplies, 23 min.

MF 5–8986 The Army Package Power Reactor, 26 min.

MF 7–8879 Terrain of the Nurenberg-Bamberg Area (Color), 31 min.

MF 11–8912 Electronic Warfare (U), 21 min.

MF 46–8902 Helicopter Mountain Operations, 25 min.

MF 46–8906 Helicopter Vibrations and Resonance —Part IV—Ground Resonance, 7 min.

MF 46–8908 Helicopter Emergency Procedures—Part II—Emergency Procedures in the H–13 (HTL), 11 min.

MF 46–8998 Flying Soldiers, 30 min.

TF 7–2634 Jungle Operations—Part I—How to Live in the Jungle, 19 min.

TF 7–2635 Jungle Operations—Part II—Technique of Jungle Combat, 23 min.

TF 7–2700 Leadership—Post-Commissioned Series, Staff and Subordinate Commander Relationship, Problem one, 5 min.

TF 7–2701 Leadership—Post-Commissioned Series, Staff and Subordinate Commander Relationship, Problem two, 4 min.

TF 7–2702 Leadership—Post-Commissioned Series, Staff and Subordinate Commander Relationship, Problem three, 7 min.

TF 7–2706 Leadership—Post-Commissioned Series, Handling of Subordinate Leaders in Combat, Problem one, 6 min.

TF 7–2707 Leadership—Post-Commissioned Series, Handling of Subordinate Leaders in Combat, Problem two, 6 min.

TF 7–2708 Leadership—Post-Commissioned Series, Handing of Subordinate Leaders in Combat, Problem three, 6 min.

TF 7–2709 Leadership—Post-Commissioned Series, Utilization of Personnel, Problem one, 4 min.

TF 9–2586 Automotive Trouble Shooting—Part XVII —Hydraulic and Air Hydraulic Brakes, 29 min.

TF 9–2690 Throttle Synchronization, M59 Armored Infantry Vehicle, 6 min.

TF 11–2237 Servo Systems and Data Transmission —Part III—Automatic Tracking and Data Transmission, 33 min.

TF 11–2487 Radio Interference—Part I, 23 min.

TF 11–2488 Radio Interference—Part II, 37 min.

TF 11–2650 Operation of Countermeasure Receiver AN/TLR 9, 10 (U), 26 min.

TF 16–2695 The Character Guidance Program, 23 min.

TF 16–2735 Moderation, 6 min.

TF 16–2736 Life—My Right to Life, 7 min.

TF 17–2600 Communication in an Armor Battalion Task Force Command Post, 26 min.

TF 30–2601 Electronic Search Recording Techniques, 37 min.

TF 33–2581 Leaflet Dissemination, 20 min.

TF 41–2590 Military Government in an Enemy City—Public Safety, 17 min.

TF 41–2591 Military Government in an Enemy City —Public Health, 16 min.

TF 41–2592 Military Government in an Enemy City—Civilian Evacuation, 25 min.

INSTRUCTIONAL MATERIALS

The following instructional material is suitable for resident as well as non-resident instruction and may be obtained from the Book Department, United States Army Infantry School, Fort Benning, Ga., at the prices shown:

Mechanical Training, 106mm rifle, 1707–USAR, four hours. Integrated conference, demonstration and practical exercise covering disassembly, assembly, functioning, stoppages and immediate action for the 106mm rifle. 20¢.

106mm Recoilless rifle; 3.5-inch Rocket Launcher; 90mm Assault Gun; 90mm Gun Tank; and 76mm Gun Tank, 1710–USAR, three hours. Conference and demonstration covering characteristics and capabilities of the 106mm recoilless rifle; 3.5-inch rocket launcher; 90mm assault gun, M56; 90mm gun tank, M48; and 76mm gun tank, M41. Includes new developments in ammunition and firing demonstrations. 25¢.

Introduction, Ammunition and Marksmanship, 106mm Recoilless Rifle, 1736–USAR, three hours. Integrated conference and demonstration covering general data, characteristics and capabilities of the 106mm rifle and its ammunition, weapons system alignment and night firing techniques. 15¢.

General Characteristics of the 90mm Gun Tank, M48, 1767–USAR, one hour. Integrated conference and demonstration covering general characteristics and data pertaining to the 90mm gun tank, M48. Operation, use, capabilities and limitations of turret control and direct fire control system of the M48 are discussed. The problem also covers the capabilities and limitations of 90mm ammunition and the direct fire support role of the M48 tank. 20¢.

Military Instruction, 7188–USAR, three hours. Integrated conference, demonstration and practical exercise to bring out the principles and techniques of military instruction and the use of training aids by teaching the duties of the battle group S3 in detecting weaknesses in training by personal observation, analyzing training inspection reports to isolate strengths and weaknesses, and formulating recommendations for the improvement of training. 20¢.

The Mortar Battery in Action, 2662–USAR, one hour. A demonstration of the operating capabilities of the mortar battery. The problem includes reconnaissance, selection and occupation of the position area, followed by live firing of a typical fire mission. The demonstration portrays the related and concurrent operations of each element of the mortar battery, including firing battery, platoon and battery fire direction centers, survey, communication and observation. Emphasis is placed on the capability of the battery to function as a unit or as two separate firing platoons. 45¢.

Concept of Intelligence, Weather and Terrain, 6607–USAR, three hours. A conference and practical exercise covering the principles of military intelligence, the value of intelligence in the exercise of command and the concept of combat intelligence. A map exercise covers the weather and terrain, the military aspects of terrain and terrain analysis. 25¢.

The Enemy, 6608–USAR, one hour. A conference on the enemy element of intelligence, including information essential for analysis of indications and determination of capabilities and probable courses of action; and an orientation on the purpose and use of the Aggressor Army. A practical exercise is presented on order of battle fundamentals, to include familiarization with the Aggressor Handbook. 15¢.

Collection of Information, 6612A–USAR, three hours. The problem outlines collection of information, to include sources of information and collection agencies, the handling of prisoners of war and enemy documents, and the use of aerial photos as sources of information. 65¢.

Collection, Reconnaissance Duties of the S2, 6616–USAR, three hours. A conference and practical exercise covering S2 reconnaissance responsibilities, to include necessary coordination with other officers, operation of observation posts, employment of organic reconnaissance elements, patrol planning and the briefing and debriefing of patrols. $1.00.

Processing Information, 6627–USAR, four hours. A conference and practical exercise on recording and analyzing information concerning the weather, terrain and enemy; drawing conclusions from processed data; maintaining a continuous intelligence estimate; techniques and methods used in posting the S2 situation map, in maintaining the S2 worksheet, evaluating and interpreting information, and preparing the intelligence estimate. 85¢.

The S2 at Work: Use of Intelligence, 6629–USAR, eight hours. A conference and practical exercise on the processing of information into intelligence and the use of resulting intelligence in several attack situations; performance of normal combat duties of an S2 at battle group level, to include maintaining a situation map, worksheet and current intelligence estimate. The conference includes a review of collection planning, the preparation of an intelligence estimate for a defensive situation, and the use of intelligence in orders, reports and records. $1.20.

Counterintelligence, 6646–USAR, one hour. A conference covering counterintelligence and familiarization with AR 380–5, "Safeguarding Military Information." 10¢.

Intelligence Training, 6650B–USAR, one hour. A conference and practical exercise on the purpose of intelligence training, scope, responsibility, personnel to be trained and implementation of training. 30¢.

ANNUAL INFANTRY INDEX

This index lists all of the articles published in INFANTRY *during 1958. The articles are arranged chronologically under appropriate USAIS academic departments.*

AIRBORNE-AIR MOBILITY DEPARTMENT

STABILIZED FREE FALL — JAN 1958
By Capt Jacques Andre Istel
Discusses the techniques and equipment used in stabilized free-fall parachuting (Sky Diving). Suggests that this safe, silent and accurate parachuting technique can be used for reconnaissance on the modern battlefield.

OLD JUMPERS—NEW TECHNIQUE — JUL-SEP 1958
By Lt Fritz Bernshausen
A couple of veteran parachutists discuss the unusual features of, and methods of parachuting from, the C-130 troop-carrier aircraft.

COMBAT DEVELOPMENTS OFFICE

A NEW LIFT FOR THE INFANTRYMAN — JUL-SEP 1958
By Lt Col Edward H. Simpson
Describes the characteristics and capabilities of the newly developed amphibious and air-transportable T-113 Infantry personnel carrier.

COMMAND AND STAFF DEPARTMENT

THE BRIGADE HEADQUARTERS — JAN 1958
By Capt Joseph H. Rapp
Discusses the purpose, organization and specific functions of the new brigade headquarters in the pentomic Infantry division.

STAFF PROCEDURES — JAN 1958
By Maj Edmund J. Carberry and Capt Joseph A. Edmunds
Discusses division and battle group staff procedures in the pentomic Infantry division. Describes the organization and functions of the battle group staff.

LOGISTICAL SUPPORT — JAN 1958
By Lt Col T. F. Horan
Discusses logistical support for the pentomic Infantry division. Covers in some detail the organization and operations of the division trains. Suggests several TOE revisions.

PENTOMIC COMPANY IN THE DEFENSE — JAN 1958
By Capt Thomas H. Jones
Discusses position and mobile defense by the pentomic rifle company. Presents a tactical exercise in which the company conducts a mobile defense with atomic weapons.

BATTLE GROUP IN THE ATTACK — APR-JUN 1958
By Lt Col Albert H. Smith, Jr.
Discusses the planning and conduct of mounted offensive operations by a battle group on the atomic battlefield.

THE BATTLE GROUP IN THE DEFENSE — JUL-SEP 1958
By Lt Col Albert H. Smith, Jr.
Discusses the organization and conduct of both mobile and position defense by the battle group. Presents a tactical exercise in which the battle group conducts a mobile defense with atomic weapons.

PUT THE INFANTRY CAR IN THE INFANTRY GARAGE — JUL-SEP 1958
By Col Frank M. Izenour
Recommends that the personnel carriers in the Infantry division be assigned to the Infantry.

GARRISON SUPPLY — JUL-SEP 1958
By Capts Chandler Goodnow and Benjamin G. Spivey
Discusses the new garrison supply regulation, AR 725–35, which simplifies supply procedures at company and battery level.

THE BATTLE GROUP COMMANDER'S PERSONAL ARTILLERY — OCT-DEC 1958
By Maj Hulen D. Stogner
Discusses the organization and tactical employment of the 4.2-inch mortar battery as an Artillery unit in the battle group of the pentomic Infantry Division.

HOW WOULD YOU DO IT? — OCT-DEC 1958
By Capt Robert F. Lynd and Lt Wesley B. Shull
Presents a tactical problem on the organization and employment of a helicopterborne, small-unit task force which is supported by atomic fires. Requirements are provided for the reader to solve. Solutions are given and discussed.

COMMUNICATION DEPARTMENT

ARE YOU SATISFIED WITH OUR COMMUNICATIONS? — APR-JUN 1958
By Capt Joseph J. Piaseczny
Discusses the communication requirements of the Infantry squad, platoon, company and battle group. Describes and assesses current and proposed communications means, including radio, wire, messenger, visual and acoustical.

TESTING BATTLE GROUP SWITCHBOARDS — APR-JUN 1958
By Capt John E. Riordan
Presents operational tests developed by the United States Army Infantry School for the SB–86/P and SB–22/PT switchboard.

COMMUNICATIONS, PLEASE! — JUL-SEP 1958
By Col John T. Corley
Evaluates post-World War II communication improvements and points out deficiencies in the rifle company, particularly at platoon and squad level. Stresses the need for improved communication training and maintenance.

HOW TO INSPECT COMMO EQUIPMENT — OCT-DEC 1958
By Capts Emil J. Stryker, Jr. and Clarance J. Schlafer
Describes in some detail recommended procedures for nontechnical inspection of all signal equipment in the pentomic rifle company.

GROUND MOBILITY DEPARTMENT

VEHICLE NAVIGATION — JUL-SEP 1958
By Capt Davant T. Williams
Discusses navigational instruments now being developed which will enable personnel carriers and other Infantry vehicles to navigate the modern battlefield under any condition of visibility and without the aid of maps, roads or prominent terrain features.

SHORT CUT TO MOBILITY — OCT-DEC 1958
By Maj Albert L. Kotzebue
Discusses the adaptability of the M56 "Scorpion" as a full-

tracked weapons platform for the 106mm recoilless rifle, the 81mm and 4.2-inch mortars and the quad .50 multiple machine gun. Describes a modified version of the M56 which will provide a light, amphibious Infantry personnel carrier.

RANGER DEPARTMENT

SQUAD TACTICS—CARRIER BATTLE DRILL — APR-JUN 1958
By Capt John T. Hodes

Describes a seating arrangement and a dismount drill which will enable a squad to leave the Infantry personnel carrier in an organized manner and ready to engage in close combat.

INFANTRY INTERN — JUL-SEP 1958
By Lt Col Alden P. Shipley

Discusses the Ranger training given by the United States Army Infantry School. Points out how this training provides a rugged internship during which the young Infantryman, like the medical intern, gets the experience he needs in his profession.

SPECIAL SUBJECTS DEPARTMENT

NONCOMMISSIONED OFFICER — JAN 1958
By M/Sgt Frank K. Nicolas

Discusses the need for strong, responsible noncommissioned leaders in our modern Army.

THE 'R' OF CBR — APR-JUN 1958
By Lt Col Walter L. Miller, Jr.

Discusses the source, detection and effects of nuclear radiation on the battlefield, and methods of combatting it.

MEDICAL SERVICE FOR MODERN COMBAT — APR-JUN 1958
By Lt Col Robert F. Bell

Discusses the problems to be faced and modifications required in furnishing medical support during modern combat.

TRAINING FOR COMBAT — APR-JUN 1958
By Lt Col Walter R. Bruyere

Recommends military mountaineering as an effective but safe method of training which provides the element of personal danger experienced by the soldier in actual combat.

OF WORDS AND WEEDS — JUL-SEP 1958
By Col John Dibble, Jr.

Provides tips on how to write for publication and how to get a manuscript published.

DON'T LEAD HIM BY THE HAND — JUL-SEP 1958
By Lt Col John M. Hinman

Points out that many senior commanders fail to develop initiative and responsibility among their junior officers because they lead them by the hand instead of delegating authority.

LET'S GIVE TRAINING BACK TO THE COMMANDER — JUL-SEP 1958
By Brig Gen Joseph B. Crawford

Advocates discontinuance of the committee system of training and recommends a return to unit training.

YES SIR! — OCT-DEC 1958
By Lt Col Leland S. Devore, Jr.

Discusses various aspects of command management. Recommends elimination of the automatic "Yes, Sir!" which leads to friction and inefficiency and suggests the creation of an atmosphere in which the commander's desires and orders are clearly understood by his subordinates.

LET'S STRESS THE BLUE BADGE — OCT-DEC 1958
By Brig Gen David W. Gray

Discusses the value of the Expert Infantryman Badge and EIB testing. Describes a method of planning for and conducting the tests.

WEAPONS DEPARTMENT

NEW BASIC WEAPON FOR THE INFANTRY — JAN 1958
By Maj R. H. Oestreich

Provides a detailed look at the new M14-M15 rifle. Discusses characteristics, mechanical training, functioning, maintenance, ammunition, sights and marksmanship.

THE CALIBER .45 PISTOL — APR-JUN 1958
By Capt John L. Eberhard

Explains three changes in .45-caliber pistol instruction at the United States Army Infantry School which enable anyone to fire the pistol effectively.

ARMY RIFLE MARKSMANSHIP TODAY — JUL-SEP 1958
By Gen Willard G. Wyman

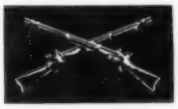
Answers questions on the Army's new rifle marksmanship program and explains its superiority over systems employed in the past.

DEATH TO THE TANK! — JUL-SEP 1958
By Lt Col Albert A. Merglen

Discusses the characteristics and capabilities of the remarkable French SS10 and SS11 guided antitank missiles.

FLAME FOR THE INFANTRY — JUL-SEP 1958
By Lt Col Walter L. Miller, Jr.

Discusses the current and projected capabilities of flame weapons for modern combat with emphasis upon their demoralizing and casualty-producing effects.



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***Infantry*, Book Department, U. S. Army Infantry School, Fort Benning, Georgia.**

GIVE LITTLE TUBE A JOB — OCT-DEC 1958
By Maj Frederick M. McConnell and Sgt Calvin W. Sears
Advocates giving the rifle platoon the hand-held 60mm mortar as an organic indirect fire weapon. Discusses the versatility, simplicity and availability of the 60mm mortar to back up this proposal.

THE SCORPION — OCT-DEC 1958
By Capt Wayne L. Seeley and Lt William T. Pye
Discusses the characteristics, capabilities and methods of employment of the M56 self-propelled, airborne, 90mm antitank gun.

MULTILITE — OCT-DEC 1958
By Maj Jack F. Kettler
Discusses a new aiming system which will enable the Infantryman to employ his direct fire weapons with greater accuracy at night.

EFFECTS OF COLD WEATHER ON INFANTRY WEAPONS — OCT-DEC 1958
By Lt Andrew W. Furlan
Discusses the effects of sub-zero temperatures and other extreme cold conditions on Infantry weapons and provides solutions to some of the problems presented.

MISCELLANEOUS

LETTER TO A TROUBLED LIEUTENANT — JAN 1958
By Capt Thomas H. Jones
Describes the challenges and rewards of an Army career and answers the questions of a troubled lieutenant who wonders whether he should or should not remain in the service.

WAR OF WORDS — JAN 1958
By Capt John W. Warren
Emphasizes the importance of equipping Infantrymen with the truth about our country and our objectives as our best weapon against enemy psychological warfare.

PENTOMIC TERMINOLOGY — JAN 1958
By Infantry *Staff*
Presents the approved titles and unit designations for pentomic Infantry, Airborne and Armor divisional TOE units.

A NEW LOOK AT SOVIET TACTICS — JAN 1958
By Lt Col Willard W. Hawke
Appraises Soviet tactical capabilities and limitations based on the latest and most valid information available to the Department of the Army. Discusses Soviet tactics for the attack and the defense in nuclear and non-nuclear warfare.

THE INFANTRYMAN IN THE ATOMIC AGE — APR-JUN 1958
By Lt Gen Herbert B. Powell
Discusses the role and continuing importance of the Infantryman in the atomic age.

THE SOVIETS FORGE AHEAD — APR-JUN 1958
By Col Theodore C. Mataxis
Discusses new weapons and equipment in the hands of Soviet troops and compares such weapons and equipment with our own.

EASING THE LOAD ON THE INFANTRYMAN'S BACK — APR-JUN 1958
By Maj Theodore K. Hudson
Describes the new universal individual load-carrying system which reduces the weight of the load slightly and makes it much easier to carry.

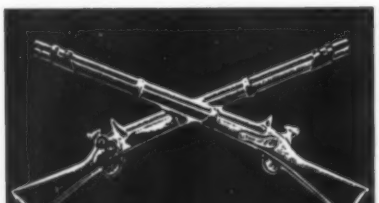
RESCUE THE COMPANY COMMANDER — JUL-SEP 1958
By Lt Col Anthony L. P. Wermuth
Advocates raising the rank of the company commander in the pentomic Infantry division from captain to major.

LETTER OF APPRECIATION — JUL-SEP 1958
By Lt Loren C. Troescher
Expresses a young reserve lieutenant's appreciation to the United States Army for the unusual opportunities and benefits he received during his two-year tour of active duty.

INFAIRTRY—A LOOK AHEAD — OCT-DEC 1958
By Lt Col Jack W. Hemingway
Discusses the present and future of Infantry-air teams. Presents a fictitious company which solves a tactical situation as it could be done today, then as it might be done in the future.

THE INFANTRY GOES TO THE DOGS — OCT-DEC 1958
By Lt Clifton H. Deringer, Jr.
Discusses the Infantry Scout Dog Platoon, its organization, training and capabilities for modern combat.

STAND UP AND TALK — OCT-DEC 1958
By Col John Dibble, Jr.
Discusses the technique of good public speaking. Points out that careful preparation, a simple approach and confidence enough to avoid memorizing or reading a manuscript make up the "gift" of good public speaking.



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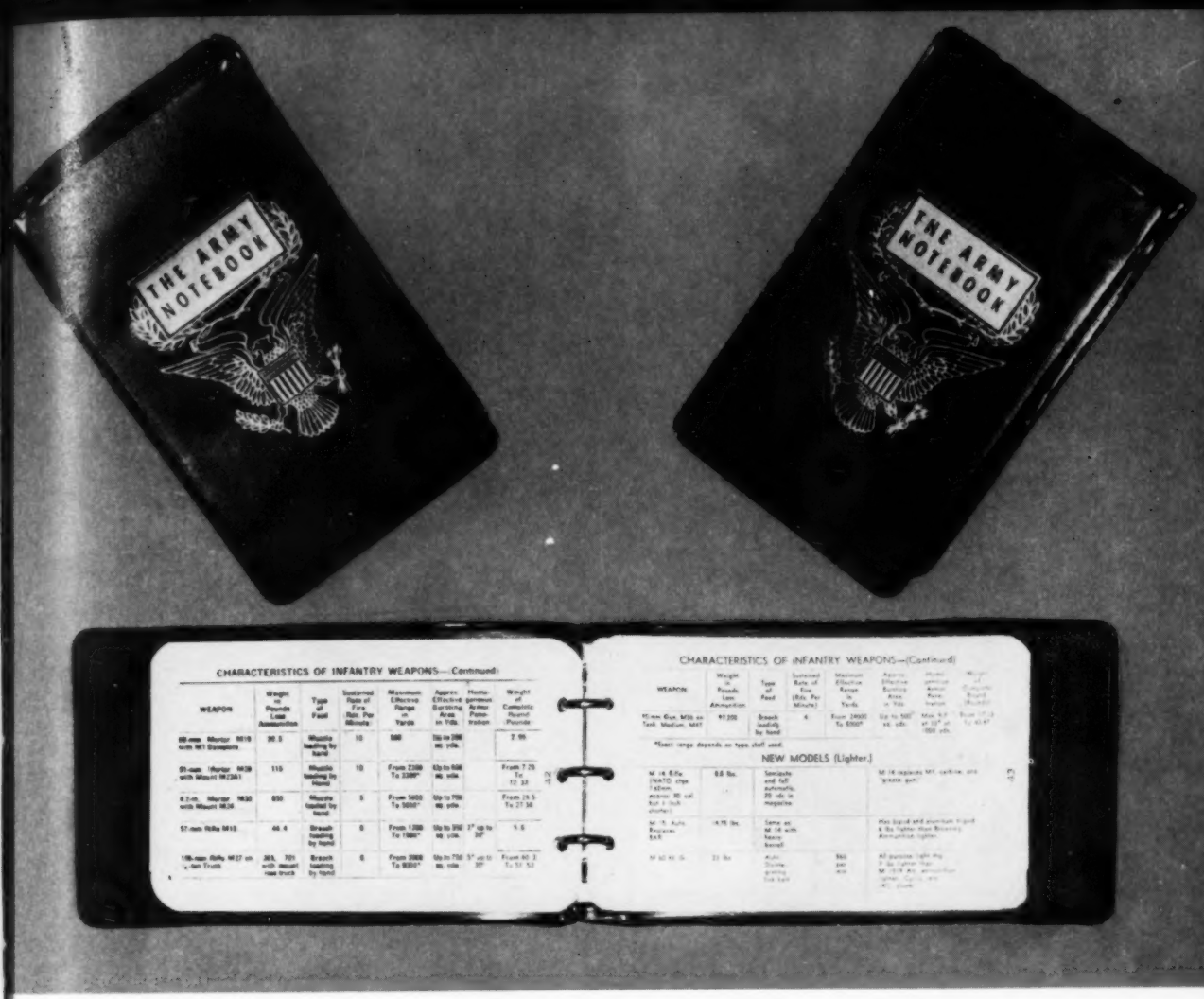

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TO THE ULTIMATE WEAPON

By Lt Col Anthony L. P. Wernuth

First in, last out . . .
Fidelio,
The angel Gabriel in a muddy helmet,
A flame-charred devil on the ninth level of *Inferno*—
The Infantryman!
The fighter's fighter.
The soldier's soldier.
He travels not along the superhighways
But along the faint trails of the world,
High along the ridges and down the defiles,
Tracing the veins and capillaries
On the skin of the earth,
To thrust his bayonet
Personally
Into the incandescent heart of battle.
The cost of this trip
Is the highest
Exacted in war.
Not for him the three-
Or ten-hours-a-day war.
Sheltered by a parasol of planes,
Served by men and machines of infinite variety,
Reassured by mortars and ships
Prowling the nearby meadows and seas,
He is,
Nonetheless,
In light and darkness,
Perpetually
Shadowed
By death.

Until, at last,
On some strange promontory,
In the midst of comrades fallen,
Suddenly,
He stands alone.
The only powers of body and spirit
Available
To be summoned
Are such as he happened to bring
To the battle—
To the personal battle
No other man
Is called upon
To undergo.
Sooner or later,
Struggling in the vortex of the whirlwind,
Tested over and over again,
With the scarred body,
The bloody fist,
The indomitable heart,
The blistered feet, and
The fighting hands,
He stands alone,
Where the danger is.
The Infantryman
Volunteers for nothing,
But every lethal device in war
Volunteers for him.
When they come after him,
They've tried and failed
With everything else
To reach
The point of power,
The focus of freedom,
The pivot of decision,
And the hottest spot in the war.
Sprawler during every opportunity,
Plodder, racer,
Stalker, raider,
Waiter,
Walker over mountains, glaciers, and swamps,
Outwitting the machine he witted,
He does what no one else can do—
He storms the parapets yet untaken
By all the machines
And munitions of war.
He lays his manhood,
Sometimes not yet reached,
On the line,
And sometimes stays forever there,
Reformed to a grotesque
Memorial,
Having given a massive transfusion
To hills like home
Or desert sands.
If there is blood on his hands,
It is a stain he carries
For every man,
Woman, and child
In friendly lands.
The rifleman lives,
If he does,
On what is left after lending time;
The beloved people
Of his country
Live afterward on borrowed time—
His.
Decorated with a flower
Flushed from a field bathed in deadliness,
Dressed in dirt,
With dusty lungs,
He hardly suggests
The beau ideal
Of every other fighting man.
Too numerous to be distinguished;
Too full of the memory of fear
To swagger;
Too tired to boast;
Too well aware of the luck
Of his own survival
To pontificate;
Too mindful of a platoon
Of missing heroes
To be a hero;
Too grateful to demean any other fighter—
If he is unimpressed with others,
It is the natural result of being unimpressed
With himself.
He is the personal fighter,
The champion,
The first in and the last out,
The irreplaceable,
The ultimate weapon! . . .
The Infantryman!